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COOPERATION IN ESTABLISHING STANDARDS OF MEDICAL EDUCATION *

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We have cause for sincere congratulations in this meeting of representative members of all three of the great organizations which have for their object the elevation of the standards of medical education in this country. Indeed, it would be almost a crime to divide forces or influence when all share one great purpose. It would be unfortunate if any personal feelings or jealousy should exist or be tolerated when the welfare of mankind is at stake; for there is no higher or more sublime object in the field of human endeavor than the protection of the health and lives of our people.

The days of witchcraft and alchemy have passed and all isms and pathies will disappear before the ever-increasing and broadening influence of true science. There are always antagonistic forces present to obstruct every move for the betterment of our profession and to question the character and fitness of its members, which are strengthened and kept alive by internal dissensions or cross-purposes existing between either of the great bodies or their members interested in the work. Therefore, it is imperative that at least these three should get together on common ground, with singleness of purpose and unity of action, until those who select medicine as their life's work can get in any section of this country an education second to none in the world.

How easily this ideal can be realized when the Council on Medical Education of the American Medical Association, with sufficient funds for all legitimate uses available and the prestige of sixty thousand physicians, with that great medium of publicity, THE JOURNAL, to inform the profession of the progress made, has joined hands with this Association of Medical Colleges, the membership of which is composed of a majority of the best schools in the country! Nothing but good can result from such a union, so long as the portal of entrance is scrupulously guarded against all but those schools which live up to the requirements of the association, not simply because of their obligation to do so, but because they believe in them and stand ready, at all times, to advance to a higher and better standard, in keeping with the progress of the age and the demands of the ever-increasing and enlightening truths of medical science.

Now, when these two are so fortunate as to work in harmony and unity with the organized examining and licensing boards of the various states having the legal power to enforce all laws and regulations passed for the protection of the people, a trio of such strength has been formed that the day of reckoning for "diploma mills" and uneducated physicians, or quackery of all kinds, is not far distant.

Then only the schools doing honest work, with standard and acceptable courses of study, will exist throughout the entire country. Then, and not until then, will reciprocity be a reality. The improvement in medical schools, in equipment and standards in both entrance requirements and curriculum, in the last few years has revolutionized medical teaching. When we consider that only seven years since we had about 170 medical schools in this country, practically as many as those in the rest of the world, and that the awakening of professional and public sentiment, educated and guided by such organized efforts as those of our own association, and those meeting with us, has lessened the number by one-third, we have just cause for congratulations.

While I would not advise reckless or unjust condemnation of others, or such radical and rapid changes as would work a hardship on those schools struggling under great difficulties to meet the requirements of the times, I would insist that the entrance into this association of colleges be zealously guarded, and that no school be admitted to membership that does not fulfil every requirement, in both facilities and teaching ability, and in honestly upholding our standards as well.

No backward step must be taken, and very thorough investigation must be made before admittance. One unworthy school can so tarnish our reputation that it may take years to overcome the mistake. In my opinion it will be equally disastrous and hurtful to the cause of medical education if we should advance standards, especially entrance requirements, beyond what the existing conditions of preparatory education can stand. To explain: it would be folly for the state boards of medical examiners to expect higher entrance standards than the schools in the states are prepared to give, and it would be suicidal for the medical school in any state to fix the entrance requirements higher than its students have had an opportunity to receive. By so doing, the schools would entirely exclude good men who seek and deserve a thorough medical education, or drive them to accept the inevitable, and enter the low-grade schools.

While, of course, I accept as the minimum the present standard of a four-year high-school course, or its equivalent, and believe that nothing under this should be tolerated, in my opinion, in view of the fact that high-school courses vary greatly in the different sections of this country and are indefinite and without censorship, the fourteen-unit plan that has been suggested would be more uniform and acceptable. I doubt the wisdom of aspiring to a higher minimum standard at the present time, especially by these bodies, all three of which are

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* Address of the president of the Association of American Medical Colleges, read before a joint session of that body with the Confederation of Examining Boards of the United States and the Council on Medical Education of the American Medical Association.

national, and must, therefore, consider the conditions of every section of the country. I have been convinced, after years of work and close study of these problems, that the cause of medical education in general will be injured in this country rather than helped by higher entrance requirements until the present movement, which is universal, shall have improved the system of preparatory and general education.

Of course, this will in no way prevent those schools which are fortunately located from demanding a standard much higher. While I am firmly convinced that our present entrance requirements and the four years of a strictly graded course are sufficient for the present, I would respectfully suggest that the trouble is not in either of these adopted standards, but in the loose way in which they are enforced.

If these three educational forces would see that every school conscientiously enforced to the letter its published requirements, without evasion or equivocation, and emphasize the fact that there is no difference between individual or personal morals and collective or school morals, they will have taught a great and much-needed lesson, placed medical education on a very much higher plane and sounded the death-knell of all pretenders and low-grade medical schools.

Improved facilities for teaching, in keeping with the necessities of an up-to-date course in modern medicine, the rapid progress of which is the wonder of the age, should be demanded. We must not only act together, but work separately, as each of the three bodies assembled here, with a common interest, has its distinctive field in which the others can be helpful only in an advisory way. The association of schools should first see that none but those doing high-class and honest teaching shall be members and that the equipment and facilities for both scientific and practical training shall be in every school.

I would emphasize the practical, as the tendency of the times seems to be to lose sight of the essential element in the preparation of a student for his life's work, viz., to combat and prevent disease, relieve suffering and save human life. While there is a place for men in the laboratories of experimentation and original investigation and research, the great majority will best serve and fulfil their mission in life by receiving a thorough training in medicine at the bedside, with a well-rounded course which will enable them to apply their laboratory training as an indispensable aid to thorough work. If the consensus of opinion, after thorough study of this great question of medical training, is in favor of an additional year, I am convinced that we would give to the world better doctors by adding a fifth year of clinical and bedside instruction rather than an extra year preparatory to the study of medicine. Facility in diagnosis and skill in the application of prophylaxis and treatment of disease can be acquired only by such a practical course of study.

With sufficient educational training to prepare the mind for the assimilation of medical teaching, a four-year course of study, as given in our best schools of to-day, with an additional year in hospital work, would, in my opinion, be an ideal preparation for one whose life-work is to prevent and combat disease. In making this statement I am not unmindful of the great advantage of a classical education in every avocation of life and I am in thorough sympathy with the improved laboratory training, without which no medical education is half complete; indeed, no doctor can practice modern medicine without the chemical and microscopic aids taught in the laboratory, for they are absolutely necessary.

The Council on Medical Education of the American Medical Association occupies a peculiar, but very important place in this work. It can exercise no authority; at the great bar of publicity its standing is conferred by the great prestige of a national association of the medical profession. While it has made mistakes, I, who have been a member since its organization, can truthfully say that, individually and collectively, as a body the Council has labored honestly and faithfully to better conditions and to elevate standards gradually, by selecting facts and giving to the profession statements of their findings in each state in the Union, thereby creating a healthy sentiment in favor of improvements in medical education as rapidly as the educational conditions would permit. Always mindful of the fact that it represented the entire country, in which standards differed widely, and which in some sections were distressingly low, by availing itself of the council and advice of all organizations laboring in the field as well as the opinion of educators all over the country, it has created a sentiment which has helped to better understanding and has made it plain that there is no longer in this country a place for the cheap and poorly-equipped medical school. It is with pleasure that I announce a recent action of the Council, inviting a delegate from the Association of American Medical Colleges to attend and take part in all of its private meetings.

The function of the Confederation of Medical Examiners is so necessary to the perfecting and enforcing all advances in medical education that it is especially fortunate that they have met with us this year. The examiners have great advantage of being on the ground, as it were, and understanding the local conditions. They can have a large influence in promoting better preparatory education, and, indeed, it would be impossible for them to exact entrance qualifications without seeing that the educational conditions of the state would justify them: in other words, they must insist on better facilities in public schools and preparatory schools in their respective states if they would insist, as they should do, that the present entrance requirements of this college association be the minimum for a college to be recognized. Again, they are indeed public benefactors when they protect their people from irregular and ignorant pretenders, as well as improve the moral and ethical relations both in the profession and with the public.

I would suggest that growth and importance bring increased responsibilities and obligations. This is true of our Association of Medical Colleges, on whose faculties are men of experience and ability, many of whom are leaders in the magnificent progress of medicine and surgery in the last few years; and I believe that if they would assist, with their combined wisdom and experience, the few hard workers in this association, our position would soon be the commanding one on all questions of medical teaching. Others interested in this work would yield to this association the right to fix all standards. For teachers, by right of their positions and experience, are the ones best prepared to suggest all advances and improved methods. They are, by virtue of their work, best equipped to inspect schools and pass on their laboratories, curriculum and teaching ability. For this purpose the president, secretary and chairman of the judicial council form what is known as a visitation committee, the duty of which is to investigate, not only applicants for membership, but the members, at least every five years; and this requirement, if it were carried out strictly, especially the occasional inspection of our members, would at once strengthen and broaden the influence of this association and commend it to the state board of examiners, do much to quiet the present state of unrest and dissatisfaction existing in many medical schools and elevate medical teaching in the eyes of the public out of its present questionable status.

Standards acceptable to examining boards could be established and the variable demand of the different states be gradually molded into a universal and much-needed standard agreeable to all. The result would be better-prepared and more uniformly educated physicians, and more ethical relations between the profession and the people. The time is ripe for some organized body to assume command and restore confidence by combining the good accomplished by the several organizations laboring in the field. We should stand sponsor for as high standard of medical education as present conditions will permit, at the same time quieting the present feeling of uncertainty which is agitating the modern school-world with the assurance that the schools would be given time to establish and enforce the demands of to-day, and adjust themselves to the changes, at least before some other radical change is forced on them.

While I would not detract from the great advances made in the last few years—and every force deserves credit for honest and faithful service—the conditions mentioned above are the natural result of lack of concerted effort and unity of action, and but illustrate the necessity of uniform standards applicable to the whole country.

Now, I ask, what body is best equipped and qualified for this work, or into what hands can be placed the elevation and perfecting of medical teaching to properly meet the demands of the present, if not our own Association of Medical Colleges? Indeed, we shall be derelict if we do not assume this responsibility. If every school which is a member would live up to association standards and assume and perform its part willingly and enthusiastically, every worthy school would seek membership, and the vexed problem of standardizing medical teaching would be solved.

State laws can be made more uniform if the American Association of Medical Colleges and the Council on Medical Education of the American Medical Association join forces with state boards, and the unfortunate necessity for the present differences in grading schools will have passed; for there will be no excuse, even commercially, for the existence of low-grade schools, and the much-needed reciprocity between the United States and Canada will be assured, and with European countries as well.

In this short paper I have tried to point out some of the strong and important reasons for all three of the educational organizations meeting here at this time. I predict that their coming together in a bond of unity of purpose will, of necessity, vitally affect every side of this great question. The combination of our interests and energies for the future promises great things for the medical profession, and, through them, for the people of this country.

In closing I would make the following suggestions:

1. This association should adopt a uniform standard after consultation with all forces interested, and enforce this standard by frequent inspections of members.
2. Inspections of both applicants and members should be placed in the hands of a judicial council or a committee appointed for that purpose; at least two men should be required for the inspection of any school, and the report should be in writing for future reference.
3. The interests of the association demand that the work be divided up so as to utilize as many men and their influence as possible, if we would broaden our field of usefulness in both higher educational and moral or ethical standing sufficiently to make membership an honor so distinctive that all good schools will desire the connection.
4. At present the four-year high school, or the fourteen units for entrance and a four-year strictly graded course of study of 4,000 hours is as high as the conditions of education will permit.
5. If an additional year is wise, then a fifth year following the present four-year plan, which shall be strictly practical and bedside in hospital wards, is preferable; and this association should insist that a hospital controlled by the college is essential to thorough training.

If these suggestions are carried out then this association will be a great factor and the day will not be distant when the medical men of America will be recognized all over the world. Then and not until then will this association have fulfilled its true mission.

150 North Eighth Avenue.

THE POISONS OF THE TROPICAL TOAD, BUFO AGUA

A PRELIMINARY COMMUNICATION *

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Poisons of animal origin, using this term in its widest sense, have always been of interest to the student of medical science, and of late years they are beginning to be of actual value to the medical practitioner. Among poisons of animal origin[1] may be named the various snake venoms, the poisons of amphibia, of fishes (e. g., the fugu poison of Japan), of mussels (mytilotoxin), of scorpions, spiders, bees, ants, beetles (e. g., cantharidin), and other insects. Among poisons derived from the organs of mammals may be named those obtained from the thyroid and suprarenal glands as having a very high therapeutic value.

While continuing our studies, in the autumn of 1910, on the convulsant action of certain organic dyestuffs, acid fuchsin, betanaphthol, phenolsulphonaphthalein, and tropeolin, we had the opportunity of trying the effect of these substances on a tropical toad, *Bufo agua*. While engaged in this study our interest was aroused by the milky secretion which exudes from its "parotid" glands when the animal is greatly irritated. Scraping off some of the secretion with a knife, we were struck by the bluish-green discoloration which appeared on the blade soon after it had been used. This observation led us to test some of the diluted secretion with ferric chlorid. This reagent was found to develop the characteristic green color of the pyrocatechin reaction. As this reaction is given by the active principle of the suprarenal glands, further tests were at once undertaken with the object of identifying the substance in the toad's secretion which reacts with ferric chlorid as described. It was not a difficult task to demonstrate that we were here dealing with a substance which is identical with, or closely allied to, the suprarenal principle. Further work on the secretion of the glands demonstrated the presence of a second body which, in respect to its pharmacologic action, is to be classed with substances belonging to the digitalis group of poisons.

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* From the Pharmacological Laboratory of the Johns Hopkins University.

[1] Faust, Edwin Stanton: Die thierischen Gifte, 1905.

The toad has been regarded from the earliest times as a venomous animal. In the Talmud[2] under the name of *tzab* (from the root meaning to swell or puff up) it is differentiated from the frog and is classed with animals whose touch contaminates. Various peoples have made medicinal use of the toad. The Chinese have long used as a remedy a preparation derived from toadskins which they call *senso*. According to a preliminary notice by Hyashi,[3] *senso* is an impure product similar in its action to digitalis, but fifty to one hundred times more powerful. Western nations also made use of the toad for medicinal purposes during several centuries and various European medical treatises and pharmacopeias of an earlier day give to the dried toad a prominent place among therapeutic agents. Thus, in the "Thesaurus Pharmakologicus" of Johannes Schröder, published in Leyden in 1672, and in the "Pharmacologia" of Samuel Dale, published in London in 1692, powdered toad is highly recommended for dropsy, bleeding of the nose and other ailments. In the "London Dispensatory" of 1702, edited by William Salmon, professor of physick, we read, "They (the toads) are hung up by the neck in the air till they are through dry, and then kept for use. Wierus saith that the poudre of a dry'd toad taken ʒss at a time or more, cures almost incurable dropsies, carrying away the water by urine. I suppose the ashes of them burned is better." In an abridged text[4] of some of the medical writings of Michael Etmüller (1644-83), professor of medicine at Leipsic, it is stated that "living toads aroused to the point of fury are venomous, but found dead they are entirely devoid of poison. Transfixed (alive) in the month of July, dried, powdered (the head and entrails being removed) and administered in doses of twelve grains on alternate days they furnish an excellent cure for dropsy. Others administer this remedy in burning fever at its height. Powdered toad is also an effective remedy against incontinence of urine, and is said to be efficacious because of its anodyne character, while its volatile, penetrating salt acts as a diuretic. From it an anodyne oil is also prepared with the aid of sea-salt and sweet almonds."

Toads as remedial agents are further mentioned in the "Pharmacopeia Universalis" of R. James, M.D., London, 1747, in the "English Dispensatory" of John Quincy, M.D., London, 1749, and as late as 1833, but here in a skeptical way only, by J. A. Paris in his "Pharmacologia."

Further testimony that very powerful principles are found in toads is seen in the fact that primitive peoples have made use of their skin secretion as arrow poisons. Thus, Pagenstecher writes:[5]

> According to reports made by the botanist André, which have been substantiated by Saffray, the Choco Indians of the primeval forests of the Sierra Templada of New Granada at elevations up to 2,000 meters employ for this purpose the secretion of a species of pelobates ("spade-footed" toad). The animal is placed in a tube of bamboo, the hands of the operator being protected with leaves, and when some of the poison is desired the tube containing the toad is suspended high over a fire. The toad soon becomes covered with a yellow juice which is allowed to drop into bowls from which it is transferred to small pots in which it gradually acquires the consistence of curari. A further supply of the poisons may later be obtained from the toads thus treated. The poison is smeared on to the tips of arrows which are shot into game from blowing tubes. A small stag is killed by a poisoned arrow in from two to four minutes, a jaguar in from four to eight minutes.

And in regard to the particular toad which is engaging our attention, Filho[6] makes the following statements:

> There exists, more particularly in the regions of the Amazon a species which is a veritable giant among toads and which Spix has described under the name of *Bufo agua*, whose venom it would be worth while to study. It is very probable that this is the species from which the aborigines of the Amazon derive the poison with which they smear the points of their arrows, in place of a sort of curara which certain other tribes use.

Further details in regard to the use of the poison of *Bufo agua* have not yet come to our knowledge, but our own experiments with it give abundant proof that it would be very deadly indeed when used as an arrow poison.

Bufo agua (*horridus, maculiventris, marinus, humeralis, ornatus, ictericus, Lazarus, Rana marina, Bombinator horridus, Xeotes, Pseudobufo* and *Docidophryne agua*) is the largest of the *Anura*, or tailless amphibia, attaining a length of twenty or more centimeters and a breadth of twelve centimeters. It is found in all of the countries and most of the islands of South and Central America, and in the warmer parts of Mexico.[7]

The specimens examined by us were obtained from the neighborhood of Montego Bay, Jamaica, where they are popularly known as bullfrogs.[8] The general color of the animal is light to dark brown with sooty dark patches and its back is covered with warty protuberances. A striking feature is two large oval, so-called "parotid glands" behind each ear. It is from these "glands" that our poison is obtained. According to Seeck,[9] these structures consist of simple, elongated glands closely packed together, the whole bearing a resemblance to a honeycomb. When the glands are hardened in alcohol their lumen is filled with a brownish compact mass.

Bristol and Bartelmez, in a short note in *Science*,[10] say:

> The poison glands are found only on the upper surface of the body, while mucus glands are found all over the skin, and are crowded together in large parotoid "glands" behind each ear. They are much larger than the mucus glands and extend deep down into the compact corium layer. They are surrounded by a thin layer of loose connective tissue which contains nerve fibers and a dense net-work of capillaries. There is an almost continuous layer of smooth muscle fibers about the gland. The cells of the glandular epithelium develop to an enormous size, and when they mature they disintegrate, their entire plasm becoming the secretion, so that when a poison gland has reached its full development it is simply a reservoir of poison. When the poison is discharged the remains of the gland are resorbed, and at the same time one of the five or six undeveloped glands, grouped around the mouth of the functioning gland, grows down alongside the remains of the discharged gland, pushing it aside to occupy its former place.

When the animal is irritated as by the bite of a dog or by some other sufficiently powerful stimulus, mechanical, chemical or electric, the parotid glands exude a large amount of a creamy secretion having a pungent aromatic odor. The glands are certainly under the control of the central nervous system, as their secretion is discharged in consequence of a peripheral irritation of sufficient strength. Budgett[11] states that "the enormous parotid glands are discharged like squirts when the creature is roughly handled." We have not ourselves observed anything of this kind, though we have repeatedly "milked" as many as sixty of the animals at a time. Under chemical and mechanical stimulation we have only noticed free exudation from the openings of the gland. We obtained the needful amounts of this secretion by the simple device of squeezing (or "milking") the parotid glands with a curved hysterectomy forceps, catching the secretion as it spurted out from the numerous orifices into a large glass bowl held inverted over the toad. The semifluid substance thus obtained quickly dries in the air to form hard, brittle scales of a yellow color, presenting much similarity in appearance to dried snake venom. When the air-dried scales are brought into contact with water they swell up to gelatinous masses, and in the presence of much water an opalescent, neutral foamy emulsion is obtained of a most nauseating bitter taste and pungent odor. In its physical properties, the secretion presents great similarity to some other animal poisons, such as the Habu snake venom described by Ishizaka.[12]

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[2] Hoffmann, D.: Das Buch Leviticus, Berlin, 1905, i, 342. Babylonian Talmud: Kethuboth 15 a; Mishna, Teharoth, v, 1.

[3] Deutsch. med. Wchnschr., 1911, No. 13, p. 624.

[4] Michaelis Ettmulleri Opera in Compendium redacta, Londini, 1701, p. 147.

[5] Pagenstecher: Allg. in Zoologie, as cited by Kobert, Lehrbuch der Intoxikationen, edition 2, 1906, ii, 470.

[6] Filho, Lacerda: Algumas Experiencias com o veneno do Bufo ictericus (Spix), Archivos do Mus. Nacion. do Rio Janeiro, 1878, iii, 33.

[7] Brehm, A. C.: Thierleben, Allgemeine Kunde des Thierreichs, 1878, vii, 602; Waite, F. C.: Bufo Agua in the *Bermudas*, Science, 1901, xiii, 342. Gosse, P. H.: A Naturalist's Sojurn in Jamaica, London, 1851, p. 431.

[8] We are indebted to Prof. E. A. Andrews of this university for much assistance in obtaining a sufficient supply of these animals.

[9] Seeck, Oscar: Ueber die Hautdrüsen einiger Amphibien, Diss. Dorpat, 1891.

[10] Bristol and Bartelmez: Science, 1908, xxvii, 455.

EXPERIMENTS MADE WITH THE CRUDE POISON

A little of the emulsified secretion, well diluted with 0.8 per cent. solution of sodium chlorid and instilled into the conjunctival sac of the dog or cat, will quickly cause an extreme constriction of its blood-vessels so that the conjunctiva becomes blanched. This action is due mainly to the epinephrin contained in the secretion, but in small part also to the digitalis-like body. When this latter substance, however, is applied to the eye in the form of a solution of the pure crystals it causes at first a momentary constriction of the smaller vessels of the conjunctiva, but this is soon followed by a marked dilatation, so that great injection and irritation result. No dilatation of the vessels of the eye is observed when only very dilute solutions of the crude poison are used, as in this case the action of the epinephrin preponderates.

A little of the emulsion injected into the abdominal lymph-sac of a pithed frog will soon cause slowing of the heart, with apparent prolongation of the diastolic pause and increase in the ventricular contractions. The final effect is complete stand-still of the heart in systole.

Little, if any, effect is noted when only a small quantity of the dried venom is given to an animal by mouth. Thus, a cat weighing 2.27 kg., received 0.035 gm. concealed in meat. Not the slightest objective symptom was noted during the afternoon on which the animal was under observation. In giving the last piece of meat with the venom concealed in it, however, a minute piece of the poison came into contact with the animal's mouth. The effect was remarkable in causing a profuse flow of foamy saliva. When the animal had ejected the last traces of the poison from its mouth, which was accomplished in a few minutes, it at once returned to its former state of quiet content. The absence of striking symptoms when even a considerable quantity of the crude venom is given by mouth is explicable when it is recalled that the digitalis-like substance of the venom is only slightly soluble in water. It will be shown later that this principle is highly toxic when injected by itself, either subcutaneously or intravenously, so small a quantity as 1.5 mg., nearly causing the death of a very large cat.

Injected intravenously into a large cat, a quantity of the emulsion containing less than 0.020 gm. of the crude dried venom induced a tremendous rise of blood-pressure followed immediately by a fall due to a sudden and complete stand-still of the heart.

When a large quantity of the crude venom is introduced into the stomach more marked symptoms are produced. Thus, 0.1 gm. of the poison enclosed in a capsule was given on an empty stomach to a dog weighing 5.8 kg. In ten minutes a clear bile-stained fluid containing most of the poison was ejected. This was followed by retching and repeated vomiting and profuse salivation, all of which continued at frequent intervals for twenty minutes. For an hour following, during which time the animal was kept under observation, it was much depressed. On the following morning it had quite recovered. In regard to this experiment we would say that the amount of epinephrin present in the venom given to this dog would alone suffice to induce vomiting if given on an empty stomach.

It may further be mentioned that an emulsion of the crude venom is a powerful and rapidly acting agglutinating agent for the red corpuscles of the rabbit, the only animal's blood tested in this connection.

THE PRESENCE OF EPINEPHRIN IN THE SECRETION OF THE POISON-GLANDS

INTRODUCTORY NOTE BY THE SENIOR AUTHOR (A.)

Fortune has thrown in our way an animal secretion which most unexpectedly is found to contain a principle which has hitherto appeared only in the suprarenal glands and in homologous chromaphil structures. In collaboration with A. C. Crawford, I isolated the active principle of the suprarenal glands of sheep and beeves in the form of physiologically active salts which I named salts of epinephrin, for example, epinephrin bisulphate, picrate, etc. The elementary composition of several compounds was established by analysis and for epinephrin bisulphate, for example, was found to be represented by the formula[13], $C_{17}H_{15}NO_4 . H_2SO_4$.

In all of my published papers[14] of that period (1897-1899) it was constantly emphasized by me that epinephrin is an unstable, basic substance, precipitable from solutions of its active salts by ammonia and capable of being separated from the other constituents of the suprarenal glands by the proper use of benzoyl chlorid.[15] And this at a time, I may perhaps be permitted to say, when von Fürth,[16] another investigator in this field, was upholding the supposition that epinephrin is either tetrahydrodioxypyridin, $C_5H_9NO_2$, or dihydrodioxypyridin, $C_5H_7NO_2$.

Later work[17] of mine showed that what I called epinephrin, and salts and compounds of epinephrin, had each and all retained one of the benzoyl radicles which I had purposely introduced into the molecule when I employed benzoyl chlorid as a precipitant. In consequence of the retention of a benzoyl radicle (an unusual circumstance in work of this kind) my salts showed a number of so-called alkaloidal reactions in addition to those which belong to the entirely unaltered native compound and which were likewise given by my active salts.

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[11] Quart. Jour. Microsc. Sc., 1899, xlii, 305.

[12] Ishizaka: Ztschr. f. exp. Path. u. Therapie, 1907, iv, 88.

[13] Abel and Crawford: Bull. Johns Hopkins Hosp., 1897, viii, 151. Abel: Ibid, 1898, ix, 215; Ztschr. f. physiol. Chem. (Hoppe-Seyler's), 1899, xxviii, 318; Bull. Johns Hopkins Hosp., 1901, xii, 339; Ibid, 1902, xiii, 31; Ber. d. deutsch. chem. Gesellsch., 1903, xxxvi, 1839; Ibid, 1904, xxxvii, 368; Am. Jour. Pharmacy, 1903, lxxv, 301; Contributions to Medical Research dedicated to V. C. Vaughan, 1903, pp. 138, 165; Jour. Biological Chemistry, 1905, i, 1.

[14] References are given in my papers to the work of Oliver and Schäfer and Szymonowicz and Cybulski, who first noted the presence of a vasoconstrictor principle in the suprarenal glands, as also to the earlier papers dealing with the chemical constituents of the glands.

[15] See Ztschr. f. physiol. Chem. (Hoppe-Seyler's), xxviii, 218.

[16] Von Fürth: Ztschr. f. physiol. Chem. (Hoppe-Seyler's), 1898, xxiv, 142; 1898-1899, xxvi, 15.

[17] Abel: Bull. Johns Hopkins Hosp., 1901, xii, 339.

Following this work came the next step, the preparation of an amorphous indigo-colored iron compound of the active principle by von Fürth,[18] for which, however, at this time no analytic data were given from which a molecular formula could be calculated. Very soon after came the work of Takamine[19] and Aldrich[20], who succeeded in precipitating the base from concentrated extracts of the gland by the use of ammonia without the assistance of such agents as benzoyl chlorid or chlorid of iron. The formula $C_9H_{13}NO_3$, first proposed by Aldrich, has proved to be the one which truly represents the composition of our substance, but, as that chemist has remarked, "it is interesting to note in this connection that if we subtract a benzoyl residue from Abel's formula for epinephrin—$C_{17}H_{15}NO_4$—we obtain a formula—$C_{10}H_{10}NO_3$—which is not far removed from that of adrenalin." Such a result is not due to chance and could have been obtained only from the study and analysis of chemical individuals.

Next came the brilliant researches of the chemists, Dakin, Jowett, Pauly, Friedmann, Stolz and Flächer which have finally culminated in the synthetic production, first of the racemic and now of the levogyrate form as produced by Nature herself. Thus by utilizing the combined labors of physiologists, pharmacologists, biologic chemists and organic chemists has science again unravelled one of Nature's secrets.

The Council on Pharmacy and Chemistry of the American Medical Association has lately adopted[21] the name epinephrin for the active principle of the suprarenal glands in preference to using a commercial or protected name and it is for this reason that I am using the word in this paper instead of epinephrin hydrate, a name which I have had to abandon and which I proposed with the idea of bringing the free base as isolated by Takamine and Aldrich into line with my monobenzoyl epinephrin.

As already indicated the fine green color produced by the addition of ferric chlorid to a solution of the crude poison of our toad together with the fact that such a solution finally turns pink when exposed to the air and that it exerts a powerful vasoconstricting action sufficed to show that we had discovered a substance closely allied to, if not identical with the epinephrin of the suprarenal glands. The results of additional tests made with solutions of the crude venom confirmed this conclusion. For example, the addition of ammonia or other alkali brought out a fine pink color which appeared instantly and was intensified by the addition of a trace of iodin or other oxidizing agent, and on boiling with Fehling's solution or with ammoniacal silver nitrate solution reduction of both solutions occurred promptly.

Two methods of isolating the newly found substance were employed, only one of which will here be outlined. From 6 to 15 gm. of the air-dried venom were rubbed up with water until a thin, foamy, opalescent solution, or rather emulsion, was obtained. This was repeatedly shaken with fresh quantities of a mixture of ether and chloroform (1 : 4) by which means the digitalis-like body was removed. The solution was then diluted with much water, whereon the mucoid and other contaminating substances were quickly removed by precipitation with basic lead acetate and the pinkish filtrate was immediately treated with hydrogen sulphid, freed from the precipitated sulphid of lead and concentrated to a small bulk under diminished pressure. The above operations from the moment of adding the solution of basic lead acetate to that of introducing the sulphuretted hydrogen must be carried on with great celerity, as otherwise there would be danger of injuring the epinephrin, since the filtrate unavoidably becomes slightly alkaline. Then too, the precipitation with basic lead acetate must be undertaken with highly dilute solutions of the venom only, as otherwise too large an amount of epinephrin will be retained in the precipitate of inert substances. When the filtrate, which has been freed from lead sulphid, has been sufficiently concentrated by distillation under diminished pressure it is only necessary to add ammonia to obtain the epinephrin in crystalline form. By dissolving in acetic acid, adding a small amount of sodium sulphite and again precipitating with ammonia, a very pure, ashless and almost colorless product is obtained.

The results of combustion analyses with products obtained in this way are as follows:

I Product Analyzed After Second Precipitation; No Sulphite Used.	II Product Analyzed After Third Precipitation; Sulphite Used.	III Theoretical Requi ments for Formul $C_9H_{13}NO_3$
C = 58.02	C = 58.68	C = 59.02
H = 6.87	H = 7.56	H = 7.10
N = 7.88; 7.88		N = 7.65

It will be seen that the analytical results here given especially those obtained with the more highly purifie preparation, stand in good agreement with the theoretical requirements for the accepted formula and prov that the elementary composition of the epinephrin from the toad is identical with that found in the suprarena glands of the higher animals.

Like the principle obtained from the suprarena glands, *Bufo* epinephrin turns the plane of polarized light to the left. Epinephrin (0.078 gm.) obtained from our toads and three times crystallized, when dissolved in 8 c.c. of water acidulated with acetic acid containing a trace of sodium sulphite, gave a polarimetric reading of —1.00 degree in a two decimeter tube with sodium light, whence:

$$[\alpha]^{20°}_{D} = -51.30°, \text{ the specific rotation.}$$

This rotation is in perfect agreement with that obtained by Flächer[22] (—51.40°) with the highly purified natural product, and differs from that obtained by Abderhalden and Guggenheim[23] for the synthetic levo-product by the error of the instrument only.

In regard to its physiologic activity—we need only state that the *rapid* injection of so small a quantity as 0.000004 gm. (1 c.c. of a 0.0004 per cent. solution) into the femoral vein of a dog weighing 6 kg. caused a rise of blood-pressure amounting to 20 mm. of mercury as measured in the femoral artery and that the injection of 0.000008 gm. (2 c.c. of a 0.0004 per cent. solution) caused a rise of 26 mm. The physiologic activity of the substance is seen, therefore, to equal that[24] of the purest specimens of epinephrin that have been hitherto isolated.

It may also be stated that this epinephrin acts promptly as a vasoconstrictor when applied to the blood-vessels of the toad from which it is derived. In other words, the animal has not acquired an immunity against this poison; small hemorrhages in this toad are as easily controlled by a local application as in other animals, and when a pithed toad is perfused with Locke's solution containing a small amount of the new epinephrin, its arterioles are found to be just as responsive to the drug as are those of the frog (*R. clamata* or *pipiens*). So, also, dilatation of the pupil is as easily produced in the excised eye of the toad as in that of the frog.

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[18] Von Fürth: Ztschr. f physiol. Chem. (Hoppe-Seyler's), 1899-1900, xxix, 105.

[19] Takamine: Therap. Gaz., 1901, xxv, 221; Am. Jour. Pharm., 1901, lxxiii, 523.

[20] Aldrich: Am. Jour. Physiol., 1901, v, 457.

[21] Proprietary versus Unprotected Names, THE JOURNAL A. M. A., March 25, 1911, p. 910.

[22] Ztschr. f. physiol. Chem. (Hoppe-Seyler's), 1908-1909, lviii, 189.

[23] Ztschr. f. physiol. Chem. (Hoppe-Seyler's), 1908, lvii, 329.

[24] Schultz, W. H.: Bulls. 55 and 61, U. S. Pub. Health and Marine-Hosp Service, Washington, D. C.

It is seen, therefore, that the results obtained by chemical analysis, by the use of the polarimeter, by quantitative and qualitative physiologic experiments have demonstrated conclusively that the substance isolated by us from the poison glands of *Bufo agua* is identical with that produced by the suprarenal glands of the higher animals.

PERCENTAGE OF EPINEPHRIN CONTAINED IN THE VENOM

It is of interest to learn how large an amount of epinephrin may be isolated from a certain weight of the crude venom. Thus, from 5.42 gm. of venom, weighed one hour after it was squeezed out of the glands, we obtained 0.243 gm. of crystalline epinephrin, a yield of 4.48 per cent. On the assumption that we obtain by this method only about two-thirds of the epinephrin actually present in the crude venom the true content of epinephrin would be nearly 7 per cent. (6.72 per cent.). Judging from other experiments in which the yield was somewhat smaller, we conclude that the secretion probably varies in its percentage of epinephrin with the season of the year and other circumstances. But as the method of isolation is not, strictly speaking, a quantitative one, exact statements as to the variability of the epinephrin content cannot be made.

If we assume that the venom as secreted by the animal contains from 20 to 30 per cent. of water there would still be present, in accordance with the above analysis, about 5 per cent. of epinephrin. In comparison with this we would recall that one[25] of us estimated that the amount found in the suprarenal glands of beeves is 0.3 per cent.

We would here state that we propose to examine the poison glands of this toad by histologic methods for the presence of the so-called chromaphil tissue, a tissue that has hitherto only been found in structures that elaborate epinephrin, and we hope also to examine the skin secretion of other species of toads for epinephrin, as we suspect that this principle is not confined to the poison glands of *B. agua*, but is probably to be found in the skin glands of other toads and perhaps also in those of other amphibia.

THE PRESENCE OF BUFAGIN IN THE SECRETION OF THE POISON-GLANDS

It has already been intimated that the venom of *B. agua* owes its efficacy as an arrow poison in a large degree to the presence of a digitalis-like substance, although the large amount of epinephrin present is an important auxiliary in this action. And it is to the former constituent or to substances closely allied to it, such as have been described by Faust,[26] that toadskins owe their efficacy as a cure for dropsy, a method of treatment which would perhaps still be in vogue had not William Withering, in 1775, introduced for this very purpose the foxglove, the active constituent of an old wives' remedy. Now that science has begun to study the ancient remedy, toadskin, we may confidently expect further discoveries in this field, possibly with results of value for practical medicine.

We have named the digitalis-like substance "bufagin" in order to have a short term sufficiently indicative of its origin.

AMOUNT OF BUFAGIN PRESENT IN THE VENOM

Quantitative experiments have shown us that 0.734 gm. of bufagin correspond to 0.1 gm. of epinephrin present in the venom, *and that if the epinephrin content* is 5 per cent. we may assume that the venom as secreted *contains not far from 36 per cent. of bufagin.*

METHOD OF ISOLATING BUFAGIN

It is not difficult to isolate bufagin from the crude venom. The poison is extracted from its solution in water by shaking with a mixture of ether and chloroform as already stated and the solvents are removed by distillation until only a small bulk of fluid remains. This is then poured into a large volume of petroleum ether which precipitates the bufagin as a white resin while holding the small amount of fatty substances in solution. The resinous precipitate is taken up in chloroform and again precipitated with much petroleum ether, whereon it may be crystallized from absolute alcohol. As bufagin is fairly soluble in this reagent crystallization can only be effected from hot concentrated solutions.

For purposes of obtaining an analytically pure product a slightly more elaborate method was employed, a description of which will be given later in the *Journal of Pharmacology and Experimental Therapeutics.* The product obtained by this method was recrystallized from alcohol and finally from hot water. Bufagin is but little soluble in water (0.0002 gm. to the c.c.), but by dissolving the substance in a small volume of alcohol and stirring this drop by drop into much hot water an aqueous (alcoholic) solution containing 1 gram or more in the liter may be obtained. From such solutions the poison crystallizes in glistening clusters of whetstone-shaped crystals and prisms which often attain a considerable size.

PROPERTIES OF BUFAGIN

As thus isolated, bufagin is found to contain no nitrogen and to consist only of the elements, carbon, hydrogen and oxygen. Its melting point is 188°C. The substance is easily soluble in chloroform and acetone, fairly soluble in absolute alcohol, but only very little soluble in petroleum ether and carbon tetrachlorid and also but little soluble in cold benzene. It is a "neutral" compound insoluble in alkalis or acids and in this respect, as in most of its solubilities, it resembles the bufonin which Faust has isolated from the skin of the common toad.

If a mere trace of concentrated sulphuric acid be added to acetic anhydrid containing a trace of bufagin, a fine pure blue color is at once developed. If the reaction is reversed so that a fragment of a crystal is dissolved in concentrated sulphuric acid and a mere trace of acetic anhydrid is then added a fine pink is obtained which soon passes into a plum color which persists for a long time. With iodin and concentrated sulphuric acid the crystals give a play of colors ranging from red through green to blue, as is seen when cholesterin is similarly treated.

If a dilute solution in chloroform is stratified over concentrated sulphuric acid, a pink to deep red zone develops at the border line between the fluids, and when they are well mixed and then allowed to separate, the chloroform solution gives up all of its color to the sulphuric acid which now shows a greenish-yellow fluorescence.

A preliminary observation shows that bufagin is dextrogyrate. Crystallized from water and dissolved in 8 c.c. of chloroform, 0.160 gm. gave a polarimetric reading of +0.44 degrees in a two decimeter tube with sodium light from which it is seen that the specific rotatory power is

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[25] Abel: Am. Jour. Pharm., 1903, lxxv, 301. See also Hunt, Reid: The Comparative Physiologic Activity of Some Commercial Suprarenal Preparations, THE JOURNAL A. M. A., Sept. 8, 1906, p. 790.

[26] Arch. f. exper. Pathol. u. Pharmakol., 1902, xlvii, 278; 1903, xlix, 1.

$$[\alpha]^{24^\circ}_{D} = +11^\circ$$

Combustion analyses[27] show that the elementary composition of bufagin can only be expressed in the formula, $C_9 H_{12} O_2$, or in terms of a multiple of this formula, such as $C_{27} H_{36} O_6$. The following tables give some of our analytical results.

I

Obtained directly from venom, but crystallized *from dilute solution in* petrol ether + chloroform without any other process of purification.

$C = 70.74$
$H = 8.67$

II

Product obtained by crystallization from alcohol after a preliminary process of purification.

$C = 70.98$
$H = 8.55$

III

Product *same as in II, only* was further purified by crystallization *from* water.

$C = 71.07 \mid 70.92$
$H = 8.28 \mid 8.25$

IV

Theoretical requirements for the formula, $C_9H_{12}O_2$ or for $C_{27}H_{36}O_6 = (C_9H_{12}O_2)_3$

$C = 71.01$
$H = 7.95$

It will be seen that our analytical results, especially those obtained with the pure product III, are in perfect agreement with the elementary *formula*, $C_9H_{12}O_2$ *or* with some multiple of it as $C_{27}H_{36}O_6$.

The results of a single molecular weight determination by the boiling point method kindly made for us by Dr. E. Emmet Reid in the laboratory of Physical Chemistry in this University, are in favor of the simple formula, $C_9H_{12}O_2$. The molecular weight as calculated from the rise of the boiling point of chloroform (0.144°C. with corrections) with bufagin in solution was 168, whereas *that calculated for* $C_9H_{12}O_2$ *is* 152. The *determination* was not thought to be entirely satisfactory because of the rather limited amount of pure substance (0.578 gm. bufagin in 87.2 gm. $CHCl_3$). Should molecular weight determinations in other solvents substantiate the value ere given, it would appear that we are dealing not with oxycholesterin as we at first surmised, but rather with an oxyproduct of a cholesterin nucleus, for certainly the chemical and physical properties of the substance point *to an undoubted and intimate relationship* with cholesterin from which there is no escape.

Cholesterin, $C_{27}H_{46}O$, is a monatomic alcohol found in all protoplasmic structures. It is a fairly large constituent of the nervous system, of sebum and other oily secretions of the skin, of bile and other fluids and tissues of the body. Of late years this substance has begun to play a large rôle in the studies on immunology and serology and the problem of unraveling its complex chemical constitution is now absorbing the attention of a number of organic chemists.

Our studies above outlined would lead one to surmise that bufagin is a depolymerized oxycholesterin. When the two molecular formulas, $C_{27}H_{36}O_6 = (C_9H_{12}O_2)_3$, and $C_{27}H_{46}O$ (cholesterin), are compared it is seen that in the former five atoms of oxygen have taken the place of an equivalent ten atoms of hydrogen in the latter. So also a relationship is indicated between our substance and the saturated hydrocarbons α- and β-cholestan, $C_{27}H_{48}$, obtained from cholesterin by Diels and Linn.[28] We are not aware that the molecular weight of these cholestans has been determined, but if we assume for them the lowest possible molecular *formula*. C_9H_{16}, then here *again we come to the* formula for bufagin, $C_9H_{12}O_2$, if we substitute two atoms *of oxygen* for four hydrogen atoms.

The substances bufonin, $C_{34}H_{54}O_2$, and bufotalin, $C_{34}H_{46}O_{10}$, which Faust has isolated from the skin of the common toad, *are no doubt also cholesterin-like bodies*, as that investigator has suggested, but their relationship to cholesterin is not so immediately apparent as in the case of bufagin, nor can it be expressed in terms of a quantitative replacement of one element by another.

PHARMACOLOGIC ACTION OF PURE BUFAGIN

As this *communication* has already exceeded the limits of an ordinary "preliminary" paper, *we shall not here* offer a detailed account of our numerous experiments on the pharmacologic action of this newest member of the "digitalis series", but will content ourselves with a bare statement of our work in this field. We have already said that the substance exerts a vasoconstrictor action when an aqueous solution is applied to the conjunctival sac. This action is also well demonstrated in perfusion experiments with the pithed frog or with the pithed toad, *Bufo agua*, only that in this case a large dose of bufagin is required since the toad shows a high degree of immunity towards its own poison. Injected intravenously into a decerebrate cat whose spinal cord is destroyed, a pronounced rise of the pressure is obtained.

The marked action of bufagin on the heart, its vasoconstrictor action and its powerfully stimulating action on the cardio-inhibitory centre (an action which is completely *annulled by section of the vagi and by atropin*) compel us to class this drug with the most effective members of the digitalis series. In two out of six experiments on dogs, in which large quantities of the drug were *injected intravenously and in which heart standstill* was induced, this organ was found on opening the chest, to be firmly contracted in systole. Stoppage of the heart in systole in mammals after bodies of the digitalis series is an uncommon experience *in our observation except in experiments* in which the organ is transfused by the Langendorff method,[29] and we make mention of the fact here as an evidence of the marked action of bufagin on the heart muscle. A more detailed comparison with other members of the digitalis group will be given later, as we propose to continue our chemical and pharmacologic studies with this drug.

EQUIPMENT AND INSTRUCTION OF THE LABORATORY YEARS *

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Before attempting to discuss the subject set before us, it may be well if we agree as to the function of a medical school, and as to the aim of all of us who devote our lives to medical education. In an address last year. Dr. Welch[1] said that our object was "*to make good doctors.*" *Professor* Minot,[2] in his Washington University commencement address, gives a more exact formulation in these words: "The chief function of a medical school is to produce practitioners." Whichever definition we prefer, we doubtless agree on the main idea: and I ask you, therefore, to bear in mind that our purpose is to make or produce something, and that something is a good physician or practitioner.

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[27] Complete data for these analyses will be given in a later paper.

[28] Ber. d. deutsch. chem. Gesellsch., xli, 544.

[29] Gottlieb and Magnus: Arch. f. exper. Pathol. u. Pharmakol., 1904, li, 30.

* Read before the seventh annual conference of the Council on Medical Education of the American Medical Association, Chicago, March 1, 1911.

[1] Proceedings of the Association of American Medical Colleges, 1910, p. 62.

[2] The Journal A. M. A., 1909, liii, 502.

THE FIVE NECESSARY FACTORS

The making of something implies five factors: (1) raw material; (2) a model or pattern (which of course may be either substantial or existing as an ideal in the mind of the workman); (3) men to do the work; (4) a place to work in and tools to work with: (5) time to do the work. The results may be bad from failure in any of these points.

Our frequent considerations of entrance requirements and qualifications of students show our interest in raw material. Our time-consuming studies of curriculum and equipment give evidence that we are concerned with tools and place of work. Our occasional weak efforts to determine who are qualified instructors indicate our interest in workmen. Our discussions of four-year, five-year and six-year courses reveal our recognition of the time factor. While our very discordant ideas as to what constitutes a "good physician" show how little we have considered the model or pattern in our educational manufacturing establishment.

WHAT CONSTITUTES A GOOD PHYSICIAN?

What is a "good physician"? Is he that lovable figure of the "Bonnie Briar Bush," "Old Chester Stories" and other contemporaneous fiction? I am sure most of you would say "No." Is he the hermit of the test-tube, incubator and centrifuge? Being that kind of a hermit, I will save you the trouble by answering "No." Is he the physician (too often found in medical faculties) of extensive clinical training, who ridicules the laboratory and says the microscope has no place in medicine? Some of you will reply in the negative. Is he that combination of assumed dignity, bombast and hair who glances at your tongue, feels of your pulse, and remarks to himself "I've got this fellow bluffed to a standstill"? We are all agreed that it is not he. But we cannot agree exactly what a "good physician" is. Some will say "practical," some will say "scientific." Some will say "knowledge": some will say "heart."

In proposing to discuss the topic assigned to me from the standpoint of the pattern or model, I shall not attempt, therefore, the task of formulating in words all the qualities of a "good physician." Some of them fortunately are on the surface and do not need a psychologist's analysis, or a philosopher's logic, or a novelist's rhetoric.

ACCURACY IN OBSERVATION

First, the "good physician" must be an accurate observer. His senses must be trained and alert. Eye, ear and finger must be sensitive and connected with a brain which is quick to recognize and discriminate. Dr. Minot, in the paper already quoted from, has discussed this matter fully and convincingly. He points out the difficulties and limitations of accurate observation; some of them connected with our imperfect sense organs: most of them, with our imperfect mental processes. I cannot go into detail here, but the upshot of the matter is that the good observer is partly born and partly made. The former moiety belongs to our raw material and need not be considered here. The latter is of immediate interest, for we know that the power of observation can be cultivated. It improves by practice. Next in importance is skilled direction or instruction.

All of the studies of the fundamental years are suited to develop observation. Anatomy more than the others is adapted to this end. In my judgment, its presence in the curriculum is chiefly justifiable on this account, rather than from its supposed practical value. Anatomy is concerned with a great variety of complex structures, whose materials, textures, forms, sizes and relationships constitute observational material of the most alluring variety and complexity. Moreover the student always feels that the subject is of practical importance, and this adds an element of interest on the part of the learner which gives to anatomy a value for the training of observation even greater than that afforded by its peculiar material and methods.

IMPORTANCE OF CROSS-SECTIONS

I feel that for the purpose we are discussing, namely, the developing of powers of accurate observation, the study of cross-sections of the body is of greater value than dissection. No doubt each supplements the other, but the study of structures from section to section with their variations, appearances, disappearances and relations must be of great influence in stimulating the power to visualize or, as some anatomist has put it, to see the body as if it were transparent, a power so necessary to the physician and surgeon and so impossible of acquisition except on the basis of accurate observation in the anatomic laboratory.

MICROSCOPIC ANATOMY

Like gross anatomy, microscopic anatomy in its various divisions, such as histology and embryology, is chiefly an observational science. Here we introduce the use of instruments of precision as an aid to observation The microscope is of the utmost importance, not on account of the immediate facts revealed, valuable though these are; nor on account of its use in diagnosis, indispensable though this should be; but chiefly because of the relation in which it places the observer with respect to the objective world. The space sensations connected with binocular vision and accommodation do not help him. The third dimension can only partially be supplied by focusing. If he is to get any idea of solidity and relationship, he must be able to visualize. He must add field to field and place section on section *in his mind*. If I may parody an old adage, he must mix his seeing with brains. Indeed the mental effort must here be inevitably the larger part of observation. Microscopic anatomy is justified on this basis if no other.

NOT TO KNOW MUCH, BUT TO KNOW A LITTLE WELL

If now it is true that anatomy is chiefly to be considered as an aid to the development of accurate observation, we immediately see the futility of hasty and careless dissection and of short perfunctory courses in histology. They defeat the very end for which these studies should be undertaken by substituting hazy impression for accurate observation; carelessness and error for thoroughness and truth.

What is true of anatomy in the above respect is true of every other science so far as the development of observational power is concerned. I think, therefore, that we have a scientific basis for the belief that it is not number of facts that we should attempt to demonstrate, but rather perfect observation and understanding of a few. Nor should we favor a multiplicity of short courses of study. Intensity and accuracy should be our watchwords, rather than breadth and general impression. If one is turned rapidly in a circle, a thousand images flash across the retina, yet one sees nothing. It is those images that are dwelt on and repeated and studied that remain and strengthen our powers and become a part of ourselves.

TEACHING AS A PROFESSION

If it be true that observing power is a chief characteristic of the "good physician," and if it be true that anatomy constitutes an excellent and probably the best training for acquiring this power, and if it be true that particular instruction and supervision are necessary, then it is perfectly evident that proper regard for the product of our educational establishment will make us provide expert workmen in gross and microscopic anatomy. If a man knows what to see in the human body, how to see it and how to bring others to see it, he has enough to keep him busy. He has no time to become competent in another trade or profession. He cannot drive a street car or conduct a real estate business or practice medicine. Hence, we have the argument, from the standpoint of a good "output," for the anatomist who shall give his whole time to the medical school.

ESSENTIAL EQUIPMENT

The same arguments that make necessary the professional anatomist make equally indispensable: (1) a proper place for him to work, which means not only teaching laboratories but also research rooms; (2) proper material for teaching and study, which means cadavers, microscopic preparations, embryos, animals, etc.; (3) proper equipment, which means microscopes, microtomes, models, photographic and projection apparatus, books, periodicals, etc.; (4) proper help, which means janitor service, technician, artist, etc. (on the universally acknowledged economic principle that it does not pay to have a high-priced man do low-class work).

We are driven by all the foregoing to conclude that an institution is failing in its regard for its "output"—for its "model," the "good physician"—when it fails properly to provide for the anatomic sciences.

KNOW HOW TO EXPERIMENT

Besides being an exact observer, the "good physician" must be, in my opinion, a trained experimenter. In regard to this statement there may be diversity of opinion. When I read it first to my wife, she said, "What I want is a doctor who *knows*. Let him experiment on other people. I want him to have his experimenting all done when he comes to me." Doubtless this expresses very well the general attitude of the lay mind; and this attitude may be responsible for the ultra conservatism of medicine. The doctor is afraid of being accused of experimenting with his patients. Nevertheless he is always doing so; and in the present lack of knowledge he must experiment, at least in treatment, whether he wishes to or not. I should perhaps add that by experiment I do not mean the use of some new drug or surgical procedure. If the physician tries the effect of rest, or baths, or gymnastics, or deprivation of coffee, it is just as truly an experiment as a first injection of "606."

The main difference between experimentation and ordinary observation is that in the former the observer controls and varies the conditions. The primary element of observation is just as important as ever, but the equally important element of controlled conditions is added. The mental process is by that addition made more complex. The results, moreover, are more fruitful than those of simple observation, since the experimenter can bring under observation conditions which Nature might never produce.

I said that "good physicians" must be trained experimenters. I believe few are such. Most physicians do not know how to experiment. Their methods are at fault; consequently their conclusions are of little value.

PRINCIPLES OF EXPERIMENTATION

The first principle of experimentation is to vary but one factor at a time. If the physiologist is studying the effect of load on muscular contraction, he does not, at the same time that he changes the load, also change the temperature and the stimulus and the speed of the recording apparatus. But I have seen a physician make all the following changes at one time: (a) put a patient in bed, (b) restrict his diet, (c) give a saline cathartic, (d) give some drug. Then he concludes that the patient's changed condition is due to the drug. This may be true, but the conclusion is not warranted from the experiment.

The second principle of experimentation is repetition. There may be an unrecognized factor. Therefore, no conclusion can be of general application unless the experiment is repeated many times with like results. Of course this is the method of inductive logic in general; but I have frequently heard physicians remark: "I never use so and so. I tried it once and it didn't give good results." This is absurd.

The third principle of experimentation is that the results to be of most value must be quantitative. The practicing physician has hardly made a beginning in the use of this principle.

THE EXPERIMENTAL SCIENCES

The sciences which are preeminently experimental are physics, chemistry, physiology, pharmacology and bacteriology. Each of these, like anatomy, has a large demand for pure observation and is valuable for developing that power. In addition, each asks for experiment. Their general principles are alike, but each has a technic of its own. Physics lends itself most easily to the quantitative method. Chemistry and bacteriology furnish valuable aids to diagnosis, but are distinctively *in vitro* as to method. Physiology and pharmacology, on account of their use of living material for experimental purposes, come especially close to medicine, not only in subject matter but also in method.

What I have said regarding observation and anatomy applies equally well to experimentation and to the sciences just mentioned. If the "good physician" should be an experimenter, surely as a student he must learn to experiment. Learning is by doing. He must learn under those who know how to experiment and how to teach that art. This argument leads inevitably to the professional bacteriologist, chemist, physiologist, pharmacologist. Only that man who is specially trained in one of these sciences, who has done and is doing research in it and who is devoting his whole time to it can teach it to the best advantage.

The same arguments as formerly made also apply regarding equipment and facilities. A chemical laboratory with a place and apparatus and material for each student and rooms and equipment for the staff; physiologic and pharmacologic equipment and laboratories for students and staff; an animal house and living material; technicians and janitors (again on the basis that an institution or factory or railroad is unwise which compels a five thousand dollar man to do the work which a five hundred dollar man can do as well or better); bacteriologic equipment including proper space, instruments and materials for the use of instructors and students; books and periodicals, and places to keep and use them—all these must be provided if the institution has a proper regard for its output, a "good physician."

A "GOOD PHYSICIAN" MUST REACH ACCURATE CONCLUSIONS

To the powers of observation and experimentation the "good physician" must add that of sound conclusion or correct interpretation or good judgment. This means the bringing of facts together and the determination of relationships. It means the recognition of cause and effect. Doubtless the psychologist would further subdivide the mental functions involved. But for our purpose the above will suffice.

Now, it is evident that you cannot make a sound conclusion without the facts, and these are gained by observation, with or without experiment. It is equally evident that an isolated fact is barren and dead. Facts are like the cells of a complex animal, all interrelated, mutually affecting and affected. The hormones or internal secretions constitute a fitting metaphor for those relationships which the power of correlation discovers between the isolated results of observation and experiment.

TRAINING VALUE OF PATHOLOGY

All scientific studies tend to develop this power of interpretative judgment, but not all to the same extent. The dynamic sciences, such as physiology, are more valuable than the static sciences such as anatomy. But perhaps the best for the purpose, at least so far as the making of physicians is concerned, is pathology. At any rate I have reserved this science to illustrate this phase of my thought.

Here we have a pathologic condition. The normal appearance, structure, relation, should be such and such. It should function so and so. How and why did this change come about, and what and how far-reaching may be its results? The entire keyboard of observational science, almost, may here be played on: physics, chemistry, zoology, botany, anatomy, histology, physiology, bacteriology. And just as in music the harmony or dissonance depends on how the notes are chosen and blended, so the soundness or unsoundness of conclusions depends on how well facts have been determined and how truthfully their relations have been perceived.

Wholly apart, then, from the significant facts which it presents—in other words, its subject-matter—pathology is justified in our curriculum on account of the training it affords in one of the indispensable mental qualities of the "good physician." The physician without sound judgment, which means without the power of scientific deduction, is indeed a very bad physician. You catch again the drift of my argument. We must supply a professional pathologist who shall devote his best efforts, in conjunction with those other scientists already mentioned, to building up the students' mental machinery for orderly and logical reasoning.

Just as in the former cases, here also, while the man is of first importance, he cannot do good work without proper surroundings and proper equipment. You must not only furnish the pathologic laboratory and library, but also, and more important, you must secure such hospital connections as will guarantee ample autopsies and supplies of material for gross and microscopic study. You must give the pathologist proper help for the best conduct of his department. You are not having proper regard for your "model" or your output, the "good physician," if you disregard these important matters.

FUNDAMENTAL SCIENCES SOURCES OF POWER

So far I have considered three traits of a properly trained medical practitioner, power of observation, ability to experiment, and sound judgment. I have attempted to prove that the fundamental sciences, wholly apart from their subject matter, are justified in the medical curriculum as sources of power. I have tried to show that they must be taught by professional scientists and not by practicing physicians. I have pointed out that proper laboratories and equipment must be provided, and that to curtail your departments in material and help is narrow business policy. There are a few practical conclusions from these premises which I wish now to present.

NEED OF THE RESEARCH PROFESSOR IN THE LABORATORY

If the sciences are to be taught for power rather than subject-matter, we have, as I have said, the unanswerable argument for the research professor in charge of each scientific department. He alone thoroughly understands the scientific method. How absurd, if this is true, is that frequent arrangement in which the professor lectures and the untrained or half-trained assistants conduct the laboratory work! Laboratory instruction conducted from the standpoint of scientific method is the most difficult form of teaching. Too often, as Dewey[3] well says, laboratory practice becomes purely ritualistic; such and such forms to go through; such and such demonstrations of manual dexterity to be secured. This degeneration of laboratory teaching is due largely to that laxity and short-sightedness which permit its being turned over to secondary instructors. Better by far, if either must be done, is to have the assistant give the lectures and the professor the laboratory instruction, rather than the reverse.

ESSENTIAL LABORATORIES

Secondly, I have spoken of student laboratories. A little reflection shows that these are of four kinds, each concerned with a different material and provided with a different type of equipment. The first is concerned with the human cadaver. The equipment is simple and for a variety of reasons the rooms must be restricted to the one use only. The second type of laboratory is adapted to chemical experimentation. The requirements of heat, water, numerous reagent bottles and considerable individual equipment, as well as the unavoidable fumes and waste products, make it inadvisable to use this laboratory for any other purpose than the teaching of chemistry. The third type of laboratory centers around the use of the microscope. Appropriate tables, abundant light, and individual microscopes are indispensable. The same room may serve for microscopic anatomy and pathology and, with some additional equipment, for bacteriology. The fourth type of laboratory is adapted to physiologic experimentation. It may also be used for pharmacology.

GOOD TEACHERS RATHER THAN FINE BUILDINGS

A medical school which has four good laboratories for students' use should spend its superfluous cash on men rather than buildings. I have no sympathy with that condition which I recently saw in one of our great medical schools where six magnificent laboratories are used only three mornings or three afternoons a week for four months of the year. I admit the advantages of good architecture and fire-proof construction and modern ventilation, but I contend that in some places departmental pride and too abundant funds have led to a multiplication of laboratories which is not justifiable. That all the ideas of industrial efficiency cannot properly be applied to universities is readily recognized, but every new building means more money for maintenance and less for men. In our line of business, to use a slang expression, the man is the "whole works," which is really but another way of saying "teacher at one end of a log and student at the other." One log will do for several teachers, if used at different times of the day or different days of the week or different months of the year.

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[3] Science, Jan. 28, 1910, xxxi, 121.

Thirdly, regarding equipment, if proper instructors are secured, you can leave the details to them. You remember the advertisement of the house-furnishing concern, "You get the girl, we will do the rest." The medical school may well be advised to get the man and he will do the rest. Getting the man, too, is as serious a matter for the school as getting the bride is for the swain for whom the advertisement was originally intended.

It was once remarked that, if you give Jacques Loeb a collar-box and a piece of string, he will make a discovery. On the other hand, I know a man who three years ago could not do any work because his Edinger apparatus had not come; two years ago he was waiting for material from Java; last year he found he needed a dark-stage illuminator and a micropolariscope. Now he is waiting for a new laboratory building. These extremes illustrate the man and equipment proposition better than many paragraphs of theory.

TEACHERS MORE IMPORTANT THAN EQUIPMENT

For our friends the state boards we may respectfully suggest that they spend more time in trying to find out whether the medical schools are properly manned, and less in making lists of apparatus which may or may not be used. I once tramped to the top floor of our medical college in order to demonstrate to an inspector that we have a perimeter; and when I showed it to him in a case with other instruments, I am willing to take oath that he was either cross-eyed or else he looked at the wrong thing. This same man did not ask how many paid professors we have, nor what their training and experience have been, nor whether we are doing any original work, nor what the annual budget is. But he did inquire what we were doing with those dogs in a medical school. And he did naively remark when I showed him the pathologic outfit: "Ah, your chemist is in charge of this work?"

Most humiliating of all—but whether for me or him I know not—was his inquiry after consulting his typewritten list whether we had a "bakoscope." I took a glance at the list to make sure I had heard rightly. It was there, "BAKOSCOPE"; and unwilling to admit that I didn't know of such an instrument, I regretfully confessed that we did not have one. I think the investigator took some satisfaction in noting this fact on his report. It was not until some days later that it dawned on me that this probably should have read "phakoscope." But of course my native modesty, up to this time, has prevented my informing the gentleman of this supposition. For the information of certain captious individuals I should, perhaps, add that the inspector in question was not Mr. Flexner or Dr. Colwell.

THE PHYSICIAN'S INFLUENCE

Coming back now to my main theme, it seems to me that the qualities of accurate observation, correct experimentation and logical conclusion are the ones which the physician must depend on for success in the practical part of his profession. They are the attributes of a good technician. But the physician is more than a technician. He stands in the most intimate private relation to his patients. The nature of his work contributes to his influence on the social order. Other men in their professional and business life are apart from society. Only in their leisure hours are they affecting the life of other people, and then not intimately. The physician's influence is always being exerted, and is always direct and potent.

THE "GOOD PHYSICIAN" A MAN OF CHARACTER

Now, the psychologic qualities bearing on this side of the physician's life are many and varied. Professor Minot[2] considers that loyalty is the trait which is most essential. But I prefer to join all the qualities of loyalty, sympathy, promptness, honesty, discretion, firmness and many more into the one quality—character. We are agreed that the good physician must be a man of character. Now character, like everything else, seems partly hereditary and partly acquired. The hereditary element, as also the early acquired, concerns our raw material. We are justified in rejecting and must reject any applicants who give evidence of defective character. That is, however, a hard problem and not for discussion to-day. The question here is, what can we do for the upbuilding of character in the medical school? I take it that this is a most serious question. Under our control and direction come a multitude of young men, many of them just from their homes for the first time and all of them pointed toward a profession whose influence reaches the very fountains of human life. We cannot, if we would, avoid responsibility for the character of these men.

But how can we influence them? They are at that age when the unfettered soul dips into life in all directions; that age whose impelling powers determine lines of progress for a lifetime; that age which examines and tests and questions all things whether material or intellectual. You cannot do much with these men by talk. A preacher in a medical school would need the rarest tact not to be worse than useless. I take it that our young men are influenced most by those whom they admire. These they imitate unconsciously.

THE BEST TEACHER A MAN OF CHARACTER

The point I am driving at is that your medical teacher must be a *man of character.* He must be a man to whom young men will be attracted and whom they may safely imitate. The scientific attitude of mind with its rigid adherence to truth supplies a basic condition of character; and that is why professional scientists and the scientific atmosphere are especially influential on the character of medical students. But other things are necessary. I would not have a teacher who is habitually profane. Not merely because profanity is wicked, but because it does not conduce to the "good physician." I would not have a man whose lectures are chiefly or even partially made up of coarse stories. I would not have as an instructor in a medical school a physician who all the time emphasizes the financial aspects of his profession.

My thesis is that character is the *sine qua non* of the "good physician," and that the principal way we can influence the medical student, who is a physician in the making, is by surrounding him with characters worthy of imitation. Consequently, the character of a medical teacher is a matter for the gravest consideration. Unless you take cognizance of this you are not having regard for your output, a "good physician."

RECAPITULATION

To recapitulate, we as medical teachers are engaged in manufacturing. Our product is physicians, and they ought to be "good physicians." A "good physician" is a man of character, who possesses the technical qualifications for accurate observation, properly conducted experimentation and sound interpretation. For the acquisition of the traits mentioned no discipline is better than that furnished by the fundamental medical sciences. The sciences therefore should be taught as method rather than subject-matter.

We must furnish for this purpose skilled professionals; in other words, investigators. We must give them places for work: that is, laboratories. We must furnish equipment; that is, tools and books. We must select good raw material and leave it in the hands of the workmen long enough to enable them to produce good goods. If we do not do these things we are not conducting an honest business. Our product is a cheap and deceptive imitation. Our graduate is a counterfeit, and we have not even the counterfeiter's excuse that we need the money, for there is no longer any money to be made in medical education.

ENTRANCE EXAMINATIONS *

THOMAS S. FISKE, PH.D.

Secretary of the College Entrance Examination Board

NEW YORK

I consider it a great privilege to be permitted to attend this conference and to speak before it in connection with questions that are so important as the requirements for admission to the study of medicine or the methods of enforcing such requirements.

I shall endeavor to show you that the medical colleges of the United States may in a way derive much valuable assistance from an educational institution which within the last few years has begun to exercise an important influence on education in every part of the country; I mean the College Entrance Examination Board.

I will not advocate that everyone who wishes to study medicine should be made first to pass an examination. There are undoubtedly certain classes of men who may be admitted to the study of medicine with comparative safety on the basis of credentials or certificates.

ACCEPTABLE CREDENTIALS

Everyone will agree that a man who is a graduate of a good college and who can produce documentary evidence that, in addition to having acquired the fundamental elements of a liberal education, he has studied such necessary preliminaries as physics, chemistry and biology may be admitted without further formality to the study of medicine. Many will urge that a man who has completed only a part of a college course and who can show that he has pursued courses in such subjects as physics, chemistry, and biology should be admitted to a medical college without examination. Many others again believe that a candidate from an accredited high school who has completed a four-year high school course in which the subjects already mentioned have been included should be admitted without examination. The North Central Association of Colleges and Secondary Schools, the New England College Entrance Certificate Board and other similar organizations have prepared lists of accredited high schools whose credentials are accepted as a basis for admission by many colleges and universities.

CANDIDATES REQUIRING AN EXAMINATION

In addition to such candidates as those whom we have just considered, a very great number of young men every year demand the privilege of being admitted to the study of medicine. In this number will be:

(1) College men and high school graduates whose credentials do not cover all of the necessary preliminary subjects.

(2) Candidates from unaccredited institutions: that is from colleges or schools which for one reason or another have not been accorded the privilege of issuing acceptable certificates.

(3) Candidates of irregular preliminary training, such as those who have been prepared by private tutors, have studied in correspondence schools or in extension courses, or who are self-taught. In this irregular class will be included naturally all students who have attended accredited high schools without completing the school course, or whose work has not been sufficiently good to entitle them to certificates.

It follows that even though a medical college adopt the plan whereby credentials are regularly accepted as a basis for admission, it will have occasion to apply an examination test to a considerable proportion of its candidates for admission. In fact, I will go so far as to assert that no certificate system of admission can be administered efficiently unless it is associated with or supplemented by an examination system. A certificate should be given by a school only when the candidate is plainly entitled to it. In every case of doubt the candidate should be made to prove his worth by means of an examination.

WORK OF THE COLLEGE ENTRANCE EXAMINATION BOARD

An examination system of national scope, open to all, is provided by the College Entrance Examination Board. This board was organized in 1900 under the auspices of the Association of Colleges and Preparatory Schools of the Middle States and Maryland. In 1902 its membership was extended to New England under the auspices of the New England Association of Colleges and Preparatory schools, and in 1903 its membership was extended to colleges and secondary schools in all parts of the United States. In 1910, the tenth year of the board's existence, it conducted examinations in nearly 200 cities and examined almost 4,000 candidates for admission to seventy-one colleges and universities. It is of interest to note that more than one-half of the candidates examined sought admission to institutions which regularly admit students on the so-called certificate plan. These candidates, however, were unable to present certificates, or if they did, their certificates could not be accepted under the rules of the institutions concerned. In the list of institutions which for one reason or another last year required candidates to take examinations under the College Entrance Examination Board appear the names of several medical colleges. I may mention the Long Island Medical College, the Jefferson Medical College, the Cornell University Medical School, and the College of Physicians and Surgeons of Columbia University.

I cannot refrain from availing myself of the opportunity to set forth in a few words some of the fundamental principles which characterize the College Entrance Examination Board and its work.

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* Read before the seventh annual conference of the Council on Medical Education of the American Medical Association, Chicago, March 1, 1911.

COOPERATION BETWEEN SCHOOL AND COLLEGE

Standing at the point of contact between the secondary school and the college, the board recognizes as *first in order of importance the principle of cooperation between school and college.* The board represents *a cooperation between the colleges on the one hand and the secondary schools on the other in respect to a matter of vital importance to both.* Not only the colleges, but also the secondary schools should have, and do have, a voice both in framing and administering the policies of the board.

UNIFORM REQUIREMENTS

In the second place, the College Entrance Examination Board does not itself assume power or claim a right to formulate definitions of the requirements for admission to college. Those definitions that have been adopted by the board have been drawn up and recommended by representative bodies of teachers recognized as having authority to speak for the subjects concerned. As a result, the requirements adopted by the board possess the two important characteristics of uniformity and stability. They can be altered only when the desirability of change has been approved by a properly representative body of teachers; and any change which is made applies equally *to all institutions.*

COLLEGE RETAINS ITS INDIVIDUALITY

In the third place, while the board represents a combined effort on the part of many colleges, it is provided that no college shall surrender its own individuality. Each institution preserves the right to enforce such standards of excellence as it pleases or to make such allowance as it wishes for character and capacity on the part of students applying for admission. The certificate issued by the board states merely that the holder was examined at a stated time and place in specified subjects, and, as the result of such examinations, received the ratings entered on the certificate. Each college determines for itself what subjects it will require for admission and what minimum rating it will accept as satisfactory.

SUMMARY OF ADVANTAGES

In conclusion, then, permit me to enumerate the following manifest advantages of the examinations held by the College Entrance Examination Board:

1. They are uniform in subject-matter. An examination in a given subject means exactly the same thing everywhere in the United States.
2. They are uniformly *administered.*
3. They are held at many points, to meet the convenience of students, at one and at the same time.
4. They represent the cooperative effort of a group of colleges, no one of which thereby surrenders its individuality.
5. They represent the cooperation of colleges and secondary schools in respect to a matter of vital importance to both.
6. By reason of their uniformity they aid greatly the work of the secondary schools. If a class is studying a certain subject, it is no longer necessary to divide the class into groups according to the particular institutions for which the students are preparing.
7. They tend to effect a marked saving of time, money and effort in administering college admission requirements.

THE ST. LOUIS HOSPITAL

DOUGLASS W. MONTGOMERY, M. D.
SAN FRANCISCO

The St. Louis Hospital of Paris is one of the oldest seats of medical learning in the world, and it looks it. Most of the buildings are ancient and, as they lack any of the modern architectural improvements, they must be expensive to run. The food, for instance, is transported long distances in large brass kettles. This must be costly, and, besides, the victuals become cold and flavorless before they reach the patient.

As the old buildings fall out of repair, the economical procedure would be to replace them by new ones. The administration, however, does not seem inclined to pursue this course. A notable exception to this state of affairs, however, is the modern building and complete equipment for treating diseases of the skin in the service of Prof. L. Brocq. This is one of the best plants of its kind I have ever seen, and is run to the best advantage by its competent chief and his corps of assistants.

The amount of clinical material in the St. Louis Hospital is, however, immense, and the physicians handling it, especially those interested in diseases of the skin, are among the foremost men in the world. It is this material and these men that make the St. Louis Hospital what it is.

One of the most interesting clinics is that of Sabouraud for diseases of the scalp.

Sabouraud is perhaps best known by his introduction of the *x*-rays as a depilatory in the treatment of ringworm of the scalp in children. Previous to this innovation the disease formed a serious problem among the school children in Paris. Now there are so few cases that application has been made to allow those from the neighboring departments to come to the St. Louis Hospital for treatment. Ultimately Sabouraud expects ringworm to be reduced to a few sporadic cases. As he expressed it, this method of treatment will do for ringworm what vaccination has done for small-pox.

The first step in this method is to cut the hair with clippers. The scalp must not be shaved, as that would remove the hairs so closely that they could not be extracted by pincettes, a most important point, as will be seen presently. The *x*-rays are then applied until a full dose is given, as measured by the radiometer of Sabouraud and Noiré. The delicacy of this operation will be dwelt on later. After this the hair becomes loose, and can easily be pulled out. Just here is a matter of importance to be observed. The bald patch caused by exposure to the *x*-rays must be examined with the minutest care for any small hairs that may still remain in their follicles, as these may contain some of the fungus, and one hair containing viable spores or filaments is sufficient to cause a recurrence of the disease.

After this epilation the whole scalp is rubbed every evening with a salve composed of:

	Gm. or c.c.
Oil of cade	10
Yellow oxid of mercury	30
Petrolatum	
Hydrated wool fat ..... āā	25

This ointment is allowed to remain over night, and next morning is washed off with soap. Then a spot larger than the diseased area is painted with:

	c.c.
Tincture of iodin	10
Alcohol	90

A remarkable feature of this treatment is the complete omission of sulphur as a parasiticide; it is replaced by tincture of iodin diluted with alcohol.

Tincture of iodin is now a favorite antiseptic in a great many integumentary diseases, and is also frequently used to sterilize the skin in surgery. For instance, in L. Brocq's clinic, in giving an injection of salvarsan, the skin was first painted with tincture of iodin, and then the needle was inserted. The same procedure is adopted in incising a furuncle. In these cases the tincture of iodin is used pure. It is diluted in ringworm, because undiluted it would be too strong to be employed for several weeks daily, as is necessary in this disease.

The ointment of tar and yellow precipitate is not an essential part of the treatment, and if it irritates the scalp so as to render its employment distressing, it may be replaced by an oxid of zinc paste (5-30).

The soap may also act as an irritant, and should it do so, an egg shampoo may be substituted, as being more bland.

The absence of the use of sulphur has been mentioned as a peculiarity in this treatment. It may, however, be advantageously employed in suitable cases. For instance, if a folliculitis supervenes, the following sulphur lotion may be prescribed:

	Gm. or c.c.
Precipitated sulphur	
Alcohol	āā 10
Water	100

The alcohol is an important constituent of this prescription, as by first triturating the alcohol and sulphur together, and then adding the water, the sulphur is better distributed throughout the lotion, and can be more easily shaken up to form a milk of sulphur.

Frequently an ordinary pyogenic infection is associated with ringworm, and then *eau d'Alibour,* Alibour's lotion, is found to be an excellent remedy. I first became acquainted with the use of this lotion in reading Prof. L. Brocq's treatise on diseases of the skin. It is a fine antiseptic, and one long in use by French physicians. It is esteemed so highly, that on my evincing a special interest in it, Dr. H. Noiré, who had charge of the clinic, had the kindness to demonstrate its mode of preparation.

It is composed of:

	Gm. or c.c.
Sulphate of copper	2
Sulphate of zinc	7
Camphorated alcohol	20
Water	1000 to 2000

The sulphate of copper and the sulphate of zinc are first dissolved by trituration with a small quantity of water in a mortar. The camphorated alcohol is also added to a few grams of water and filtered and then poured over the above-mentioned solution of the copper and zinc salts. To this enough water is then added to measure up to either 1,000 or 2,000 gm., according as a stronger or weaker antiseptic is desired.

In former days saffron was also included in this prescription, and long boiling was necessary in order to extract the coloring matter from it. These were the days when the color of a therapeutic agent was supposed to play a great part in its efficacy. Ask almost any modern medical man about the doctrine of signatures, and if he does not happen to surmise you may be talking of some question in medical jurisprudence relating to the forging of bank-checks, he will answer by a blank stare. Yet the doctrine of signatures once played a great rôle in the practice of medicine. According to this doctrine it was thought that rhubarb acted beneficially on the liver because of its yellow color, resembling bile. It is needless to say that leaving out the saffron in the *eau d'Alibour* does not diminish its efficiency. The camphor, however, should not be omitted, as it acts suavely and beneficently on the skin.

The camphor in mass should not be added directly to the water, as it will float and refuse to dissolve, except under long trituration. If, however, it is added as camphorated alcohol, it readily associates with the water.

The *eau d'Alibour* is an excellent antistreptococcic as well as antistaphylococcic lotion, and may therefore be advantageously used in erysipelas and in panaritium.

If a treatment is strikingly efficacious it may also be depended on to have its disadvantages. The x-ray treatment for ringworm of the scalp is no exception to this rule. The difficulty of treating ringworm of the scalp by the ordinary methods lies in the thick coating of stout hair in which the fungus lodges. As the affected area is completely denuded of hair by the x-ray, the disease then becomes as easy to treat as if on the free surface of the skin. In order to secure this complete denudation, however, a heavy dose of the x-rays has to be given—usually about fourteen minutes at 20 cm. The risk of causing an x-ray burn is therefore imminent. When the pastilles of Sabouraud, which are placed midway between the target of the tube and the patient's scalp, change color, the current is shut off. These pastilles are made in Germany, England and France, and the delicacy of the operation may be judged by the fact that Noiré drew my attention to the fact that the control tints in the pastilles made in both England and Germany were wrong.

When I spoke to one of the most eminent specialists on diseases of the skin in the St. Louis Hospital of the denudation of the scalp by the x-rays, he shook his head and said, "That is a delicate matter." In Sabouraud's clinic they say they never have any unfortunate results with the x-ray, but other operators sometimes get permanent baldness. Then there may be burns, but it is not necessary to have a burn to have trouble. In Wickham's Clinic I saw a nevus-like dilatation of the small vessels of the skin that appeared several weeks after exposure to x-rays, where there had been no burn.

While in London I mentioned to a skin disease specialist, who used the Sabouraud treatment for ringworm of the scalp, what Noiré had told me of the incorrect control tints in the radiometer as made in England, and got the following interesting explanation: A practitioner caused an x-ray burn, and the patient sued for damages. The physician in his defense said that he was guided in his dosage by the tints on the radiometer, whereupon the patient entered suit against the manufacturer and won. As a consequence the manufacturer so changed the tints as to conform to a much smaller dose of the x-rays. That the dose as indicated is ineffective did not trouble him. In England just now there seems to be a mania for making any one who has any money responsible for anyone who has nothing. That line of conduct has its disadvantages, however, as above shown by the example of the radiometer.

In order to get a just idea of the enormous skin disease material passing through this hospital it is necessary to attend the general admission clinic. Here the patients, stripped to the waist, march in line up to the examining physicians. There is no attempt at history taking; the diagnoses are of the speediest; and the few words relating to treatment are given with equal haste. It is an embarrassment of riches, and amounts to a great evil, as it induces a habit of making snap diagnoses.

Two parasites play the leading rôles in this procession, the *Spirochæta pallida*, and the itch-mite. If the patient has syphilis, he is asked if he wishes to enter the hospital, and if he has scabies, the physician inquires if he is married or single. If the patient is married, he is advised to include his wife and family in the treatment. The necessary questions and commands are uttered with the automatism of a church service, and the whole affair passes along with cinematographic rapidity.

It is easy, however, to be a critic, especially an adverse critic. Every one should be judged by what he has accomplished, and undoubtedly the French are doing a good day's work in medicine, and especially in diseases of the skin.

It is interesting to watch these long lines of almost naked human beings advancing toward the physician, who is to order for one tar, for another mercury, for another resorcin, and for still another sulphur as an amelioration or a cure. In Genesis it is stated man is made of clay. Human beings are, therefore, according to this view, nothing but animated pottery, and on the surface of these stronger or weaker vessels one may see different designs; on one a patchy scaliness indicating psoriasis, and on another papules curiously formed and arranged, spelling out clearly the diagnosis syphilis; in yet another, lichen; and in still another, pediculosis. It must be said that these spots and splashes of color, and rococo outbuddings are more fantastic than artistic, but their correct interpretation becomes, after a time, as interesting as any game or employment in which the perceptive faculties are actively called into play.

The physicians here are the same as in other parts of the world, in that they do a great deal of good work gratuitously, but in following St. Paul's advice to distribute to the necessity of saints, they find that the comforted saints often exhibit a frail side. As an instance of this, I ran across a curious industry in the St. Louis Hospital. A patient would apply for treatment, and receive the appropriate medicine free of charge. Then he would promptly march off to a drug-store and sell it. Those suffering from syphilis are said to be particularly iniquitous, and the little proto-iodid of mercury pills are easily disposed of. It may be objected that these are not saints, but in truth they are, for repentance is of the very essence of sainthood, and fittingly to repent it is necessary first to accumulate a good stock of sin, together with a good admixture of misery. The well-fed, comfortable sinner, like the king in Hamlet, stops short of complete repentance, and therefore cannot attain the crown of sainthood. It is to these shattered hulks, dismasted and battered by the storms of life that Rabelais dedicates his great book. It was such as these that stirred the sympathies of the greatest Scotchman that ever lived, and inspired him to write the great poem, "The Jolly Beggars." Many of the patients in the clinic of the St. Louis Hospital looked as if they could eat a dinner, and without waiting for the recommendatory preface of a benediction either.

323 Geary Street.

Medical Inspection of Schools.—Medical inspection is becoming a vital part of every modern system of education. To obtain valuable results accurate data are necessary. It is essential that thorough supervision be made by a state medical inspector, who should be a medical man. A state association of medical inspectors should be formed. Permanent efficiency will require skilled workmen, careful administration and adequate remuneration. W. J. Lamson, in *Journal of the Medical Society of New Jersey.*

THE TEACHING OF VISCERAL ANATOMY, OR ORGANOLOGY

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Medicine as a science is yet in its infancy; its composite development, its evolution, forms a steadily increasing curve, but each of its component parts form irregular curves with frequent rises, falls and stationary levels, when historically considered. The close of the last century marked the completion of a period of rapid development in surgical science, during which it was, perhaps, eminently desirable that the medical student should view anatomy with exaggerated reference to its surgical importance.

The beginning of the present century offers promise of an equally important development on the side of internal medicine. The former necessity is now superseded by the latter, and for the internist an accurate and extensive familiarity with visceral anatomy is of fundamental importance.

If there was a time when students could be allowed to devote weeks to the careful dissection of an arm or a leg and then for want of time pass cursorily over the abdominal contents and perhaps fail entirely to open the thorax, cranium or spinal canal, that time is past; the demands of the internist in the present generation call not only for careful visceral work in the dissecting-room but for an amplification of that course by such methods as shall result in accurate conceptions of living structure, which in turn can result only from the familiarity obtained through extensive first-hand acquaintance with the tissues themselves. It is for the satisfaction of these demands that courses modeled along the lines which I am about to indicate must be offered to the medical student of to-day.

The form, position and external relations of the organs are best observed in the "fixed" material of the dissecting-room, and if only recently prepared or carefully preserved tissue is used, the conception in the mind of the student will be well formed. But it is essential that the tissue be perfectly preserved and that the dissection shall be so rapid and careful as to allow no opportunity for excessive evaporation with coincident changes of color, texture and size. Even at its best, preserved dissecting-room material will show considerable changes in color and some hardening of texture. Material which has lain for weeks on the table during the dissection of the limbs and body wall, unless it has received the best of care, is not entirely satisfactory for the proper study of the viscera. To obtain the best results from the standpoint of organology a body freshly prepared by injection should be brought directly from the preparation room, its paries at once opened, as at autopsy, and its viscera carefully surveyed, as rapidly as is consistent with thoroughness, first for their position and general relations and then for form and structure. Such organs as are not badly altered by disease should then be removed, their connections to paries and to adjacent organs and especially their vascular connections being carefully noted; then their surface markings are to be carefully observed and their architecture thoroughly studied. Even at the loss of some material the finer details of dissection involving the topographic anatomy of the organ will be better pursued on other material.

But even at its best, dissecting-room material only partially fulfils the requirements of an accurate conception of the living viscera. Accurate conceptions and exact knowledge of any matter are obtained only by intimate first-hand acquaintance with the material. Abundance of opportunity for handling anatomic material should be afforded the student; no source of supply should be neglected. A course in organology is therefore incomplete unless it utilizes an abundance of fresh tissue, which only the autopsy room can supply. Since the nearest approach to the actual living organs obtainable for anatomic study is found in the human tissues at autopsy, and in the fresh tissues of the lower animals, both of these sources should be extensively utilized for the purposes of organology.

The recently dead animal presents organs, to all intents and purposes, in a living condition. In certain cases their cells can be transplanted and caused to grow; indeed, they may even be cultivated extraneously as has been demonstrated by R. G. Harrison and others.

The fact that the lower mammalian organs differ anatomically from the human is not an objection to their utilization, for, indeed, the very differences may often be used to broaden the conception of human structure. The fact that the sheep's kidney is lobulated, or that the kidney of the horse or dog has but one pyramid does not detract from the value of either in demonstrating the structural relations and appearance of the living human kidney, and if properly utilized they respectively elucidate a logical conception of the markings on the surface and the contents of the sinus of the human organ. Again, the objective study of the surface markings of the adult human lung is difficult of interpretation without reference to the child, the infant, and the lower animals.

But while lower animal tissues may be of great value in the demonstration of certain structural features they cannot be relied on as material for any great portion of such a course as is under discussion. Human anatomy must be primarily taught from human material. The handling and study of unaltered human material from the autopsy room offers the most valuable instruction to the anatomic student.

The utilization of this source of material cannot be left till such time as the student may pursue his work in the autopsy room under the instruction of the pathologist, for there he will be concerned, not with anatomic details, but with pathologic lesions, and his facility in pathologic study will largely depend on the accuracy and fulness of his anatomic conceptions, and on his familiarity with the structure and appearance of the normal rather than diseased viscera.

The result of a pedagogic experience of some years has convinced me of the fundamental importance of anatomic instruction based on fresh human tissue. A student of anatomy cannot see too much material of this kind; he should use it for most careful study.

Much normal tissue is removed at autopsy by the pathologist; with proper cooperation it should find its way, while still fresh, to the department of anatomy. A course in organology based on such material, amplified by the use of lower mammalian and other animal tissues, by museum specimens carefully prepared to preserve form, color, and to show the vital appearance, as nearly as possible, of certain special features of anatomic structure, and the whole broadened by coincident demonstrations on dissecting-room material which has been carefully and freshly prepared with organs fixed *in situ*, offers to the student of anatomy a well-nigh ideal opportunity for developing an accurate conception of the human body as it actually exists in a functionally active condition.

That such a course is utopian is not true. The fact that just such a course has been offered for the past three sessions in the laboratories of the Cornell University Medical College demonstrates its feasibility. The essentials are some time and energy on the part of the corps of anatomic instruction, and a very little friendly cooperation on the part of the pathologists. The time demanded from the student is little, because what is consumed in actual work renders so rich a return in improved knowledge of structure and of general, fundamental, anatomic characters that the work of the dissecting-room, and especially of the microscopic laboratory may thereby be very materially abbreviated. For this reason such a course in organology is best taught in connection with microscopic anatomy and the work so correlated that the gross anatomy of the organ immediately precedes its histology.

The consideration of the value of a course in organology on the above lines directs attention at once to certain phases of the relative value of the didactic and laboratory types of instruction. The value of the former type depends on the assumption that known facts are more readily obtained by the novice through the recorded observations of his predecessors, while the laboratory type presupposes that an accurate and utilizable knowledge must result only from personal contact with the object of study.

For this last type of work a progressively increasing value is represented by the book, the model, and the actual material. Given unlimited time and unlimited material, a trained student has little need of other sources of information. But for the great bulk of medical students time in the laboratory is not unlimited; hence the intensity of the laboratory work is greatly enhanced if accompanied by ample opportunity for reading and reflection in study hours. In the course which I have hitherto offered, the work of the student is also greatly facilitated by the use of a brief syllabus which indicates the names of structures of anatomic interest, without comment or description, arranged in the order in which they are uncovered.

With such opportunity it is remarkable how rapidly an accurate systematic conception of an organ may be acquired. In the laboratories of the University of Chicago it has been found that the study of the human brain is not only simplified but accelerated by a preliminary examination of the less complex nervous system of the dogfish, and the course is therefore begun with the dissection of the selachian nervous system. A true conception of the general fundaments, the gross divisions of structure as it were, renders the more intricate and complicated system so much more readily mastered as to result in an actual saving of time to the student as well as in a more utilitarian knowledge of the subject.

Likewise, in my laboratory at the Cornell University Medical College the survey of the fundaments of structure represented by gross organology as outlined above rendered possible an actual shortening of the time allotted to microscopic anatomy, and, far more important, I believe that the student better appreciates the full structure of the organs so studied. It is a matter of observation that he turns from his anatomy to his physiology better prepared to apply his anatomic knowledge to the deduction and explanation of function than was possible under other conditions. When one has studied in the gross the bundle of His and its ramifications, seen it in the fresh tissue, as well as in the dissected specimen and the microscopic section, and all have been properly correlated by coincident study, he has a preparation for the consideration of heart-block which cannot be obtained by the isolated work of the dissecting-room or the histologic laboratory. When those courses have been correlated by the study of the conduction system in fresh tissue and the transference of bits of known location to the stage of the microscope for verification of structure, the student thus prepared is in full possession of the anatomic mechanism, so far as it concerns the bundle in question, on which the phenomenon of heart-block largely depends.

A course in organology based on fresh material is, therefore, closely related to the work of the microscopic laboratory, and for him who pursues it the utmost of value is only obtainable when the facilities of the autopsy, the dissecting-room, and the microscopic laboratory have been coincidently placed at his disposal. With the organization of broad-minded departments of anatomy with gross and microscopic work provided for under the same head, an arrangement now generally adopted in leading medical schools at home and abroad, such correlation of work appears entirely feasible and eminently desirable.

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THE EDUCATIONAL FUNCTION OF HOSPITALS AND THE HOSPITAL YEAR*

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The central figure in every hospital is, or should be, the patient. Whatever use is made of the hospital as a means of education it should be self-understood that whenever the sick man enters it he has a right to expect and demand the most skilled treatment its staff can offer. We physicians believe that the best treatment will be in the hospital that clearly recognizes its educational function. But if the patient be utilized for the instruction of nurses, undergraduate or graduate medical students, or in the working out of some scientific problem, there must be assurance that his life is not endangered or his health impaired thereby. We may use him as "material," to employ the word that unfortunately has become fixed in our medical vernacular, but not as we use a Wheatstone bridge, a burette, a test-tube, a guinea-pig or a rabbit. We assert that it is our right and duty to experiment with inanimate apparatus, and—when we are humane—with the lower animate bodies, even though the test-tube break or the rabbit die. But a human being is neither a test-tube nor a guinea-pig. We may study his disease, even experimentally, but we must treat *him* as a fellow-man.

A modern hospital fully awake to its privileges and with the high aim to do the greatest possible amount of good will strive to educate: (1) undergraduates; (2) interns, graduate or undergraduate; (3) resident physicians and surgeons; (4) the attending staff; (5) nurses; (6) research workers; (7) the patient; (8) the public.

I. UNDERGRADUATE INSTRUCTION

Undergraduate medical instruction can best be carried on in a hospital founded primarily for educational purposes, and especially one under the immediate control of a medical school. The student's presence in the ward is not looked on as an intrusion or as due to favoring condescension on the part of the hospital authorities. He is there by right; he makes examinations, acts as clerk in recording changes in the patient from day to day, is laboratory assistant, etc. And yet he is without authority to prescribe for or to treat the patient. He makes no promiscuous examinations. He is watched and guided and does no harm. He follows the case during the course of the illness. A student carefully observing and studying even a small number of cases of illness, even though the maladies be simple, compelled to keep complete records that are scrutinized daily by his superior, has learned more of correct methods and of practice, perhaps more even of fact, than from hours and hours of lectures.

In the majority of our public hospitals the lax methods, the multitude of students, the prejudice against the use of the patient as "material," the politician's fear of criticism, the failure to provide capable and responsible supervision, make students' ward work very unsatisfactory or wholly impossible. Much is often accomplished by means of small-group clinics with the student at the bedside as the case is demonstrated, or by ward walks as in England. And much is done by the arena clinic, no longer popular as of old, but by no means entirely out of date, and still fulfilling a useful though subordinate purpose.

II. INSTRUCTION OF INTERNS

Of the value of an internship in a good hospital, where, in addition to the student's clerical and laboratory work, there is actual responsibility, usually a graded responsibility, i. e., one increasing with his length of service, there is no question. No one who has had the advantage of such a training doubts its value; no one who has not had it but regrets his inability to secure it. The eager competition among our raw graduates for these positions shows the estimate placed on them by our student body.

Sooner or later some period of training—say a year—in a hospital should be required of every student before he becomes a licentiate in medicine. If the time is ripe it should be demanded now. We must command the support of the public in this advance by making them see that if the young graduate does not gain his practical experience in a hospital under the guidance of older heads, and in an atmosphere redolent of traditional medical knowledge handed down from one generation of interns to another, and from one group of attending men to another—and this traditional knowledge is one of the most valuable assets of a hospital—if he does not get his training in this safe-guarded manner before he is a licensed practitioner, he is forced to get it in his private practice on your child or on mine and with no counseling voice of senior to keep him from sins of omission or commission.

The marvel is that so many men with utter lack of hospital training are able to go out and do so well—i. e., do so little harm. Native shrewdness, earnest endeavor, tact, ability to learn quickly from others and from their own mistakes, enable them to succeed in a wonderful manner. How many sad, even fatal, blunders are made through lack of proper practical training no one can tell—it is best not to tell. Even the celebrated Dr. San Grado wished Gil Blas to go about with him for a few days on his rounds of bleeding and drenching his patients with water before the said Gil Blas was to be permitted to practice as the representative of San Grado.

The difficulties in the way of a required fifth hospital year are not insurmountable. More internships must be available to accommodate our large annual output of doctors or the number of graduates must be lessened. Why not both? If the efforts made by this association are successful the number of graduates in medicine will be diminished. But the number of hospitals will increase; and many small hospitals now working without interns—and there are large ones, too, in this same condition—will see that it is impossible to get along satisfactorily without these assistants and so more places will be available. But there is another difficulty, and to my mind, by no means an insignificant one. How are these hospitals to be standardized? In general the work of the staff and of the interns, in a hospital with medical college affiliation, is up to the standard of the medical school itself, yet not always. The small medical school with the large hospital at its command can take care of its own graduates and place them as interns. But what about the large medical school with a small hospital? Its graduates must be placed in other, perhaps remote, hospitals. Now there will have to be a good deal of educating of some hospital boards of management and of many medical staffs, taking hospitals as they run, before we can declare that an internship in some of these hospitals meets anything like satisfactory requirements. Many small hospitals, and many large ones, with no medical school attachment would readily be conceded as up to grade. But in many hospitals, some small, some large, some in the small towns and some in the large cities, the intern does little more than give an anesthetic, dress and take the blame for the pus cases, and occasionally examine the urine or sputum. There are no histories, or none worthy the name, no laboratory tests, no thorough examination of a patient. The intern gains a certain amount of self-confidence, often an unwarranted amount which is largely absorbed from the staff, though there is seldom any appreciable loss at the source of supply, he learns not to faint at the sight of blood, learns the dose of a good many drugs; some of which he might well forget, and he learns that an easy, a lazy substitute for thinking is to do an exploratory laparotomy. Such training is superficial, incomplete and in many respects pernicious. The medical school with a high standard for both entrance and graduation must pause before committing itself to a policy of a compulsory hospital year until there is in sight a sufficient number of places in good hospitals where work will be up to grade and where by virtue of authority to inspect and supervise there may be a guaranty that it will be kept up to grade and satisfactory to the college and to the officials of the state. Before a compulsory fifth year is added to our college requirements for graduation a certain standard for hospitals must be fixed and means taken to sustain the same.

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III. EDUCATING RESIDENT PHYSICIANS AND SURGEONS

The older I grow and the more I see of surgery, the more convinced I am that the mere holding of the degree M.D., as at present granted, ought not to entitle a man to do surgical operations, at least major operations. The lack of manual dexterity and celerity, the poor judgment as to how much can and ought to be attempted in a given case, the puttering and hesitating due to insufficient self-confidence and to a fear of supposed dangers, or the equally horrible condition of overconfidence and lack of dread, how keenly do all these shortcomings, the result of limited or no practical training, loom up before us when we contemplate an operation to be done on our friend or some member of our own family by one of these poorly qualified young graduates! No surgery, no major surgery at least, no special surgery, should be permitted to the graduate until he has tried it first on dogs; no surgery until as assistant, and perhaps resident, he has for a given time stood at the left and then at the right hand of the surgeon and has himself, with the help of this surgeon, done operations. When the good, honest family practitioner tells you that he is convinced that surgical treatment of appendicitis is wrong, because, in his operative cases, three out of four patients died, including clean cases in which the patients were operated on in the interval, and says that he shall return to the medical treatment which gave him better results, we agree that it is wise for *him* to treat appendicitis medically. But the smile that comes to our faces as we note the delicious humor of his innocent condemnation of self as a surgeon is turned to a sober frown as we realize the pathos and tragedy of the clean cases. Make surgery more of a specialty if you will; let there be fewer surgeons in a given area if necessary; divide the fee—openly—if necessary; but insure more expert work by requiring a special hospital training before the graver operations are attempted. Our hospitals can here do a splendid educational work by giving opportunities to residents and assistants working under the responsible guidance of the older man.

IV. EDUCATING THE ATTENDING STAFF

Of the value of the hospital experience to the member of the staff there is little need to speak. Every physician and surgeon admits freely that the faithful performance of his hospital duties makes him a broader, more careful, more skilful man. There is only one point in this connection that I would emphasize, and that is that those hospitals in which there is a distinct teaching feature will have the best service from the staff, especially in the case of the poorer and charity patients. Nothing so arouses the physician to do his best, to study his patient so thoroughly as the knowledge that that case of illness has to be demonstrated at short range to a class of keen-eyed students. A few bad blunders before a class are all that is necessary to make him more careful next time. And then the rubbing of elbows with our colleagues, the activating influence as the older man is inoculated with the enthusiasm of the young man of the staff, just back from Europe, perhaps—all this is helpful and educational.

V. EDUCATING NURSES

It is not my purpose to dwell on the function of the hospital as a training school for nurses. Its duty in this respect is becoming more generally recognized and the advantages that accrue to the hospital, the patient, the physician, the public, are too well known to be repeated here.

VI. EDUCATING RESEARCH WORKERS

The spirit of research has reached many of our hospitals. Some have been founded with the primary object of promoting research along medical lines. It is to be hoped that more will be liberally endowed so that this highest grade of work may be carried on with the closest possible union between laboratories, as they are commonly termed, and the wards that are also really laboratories. While it is not possible that all our hospitals should be, *sensu strictiori*, research hospitals, while it is not desirable that they should all be of this character, there should be more of the spirit of investigation and reaching out for new truth in our existing hospitals, even those that are utilized for the instruction of undergraduates, interns, residents and attending staff. Unless the spirit of research be in such a hospital and pervade its various staffs, the educational function languishes and the hospital atmosphere is stale. To be progressive, research must be carried on. It may be in trying out methods advocated by others or devising new and better ones; it may be along lines of therapy, surgical or medical; it may be studying the refinements of diagnosis or the natural history of disease, or in the chemical, bacteriologic or anatomic questions concerned in disease; it may be searching for results that are of immediate practical application or working on problems in pure science where no practical bearing is in sight, but something of this sort must be carried on by the hospital workers or a hospital is not doing its duty in furthering knowledge. And I am of the opinion that our hospitals will be utilized more and more for research work in sociologic problems. There is a rich field for such investigation in many of our wards.

VII. EDUCATING THE PATIENTS

Much might be said of the help our hospitals may bring to their patients in teaching lessons of obedience to authority, consideration for and cooperation with one's neighbors, etc. Lessons of cleanliness and of hygiene are also taught, and surely certain lessons in morality are inculcated in ways as effective as any pulpit eloquence. But this is not the time or place for discussing this topic.

VIII. EDUCATING THE PUBLIC

Nor is this the place to speak of the opportunity many of our hospitals have of educating the public as to matters of personal and public health. By example, by class and lecture work, by literature, by letting the hospital light not be hidden under a bushel, such an institution may be a power for good in the community and be the means of combating the effects of many foolish or even harmful "isms" and "pathies" that are everywhere to be found.

SUMMARY

To summarize these points which have consciously been merely touched on and not dealt with exhaustively—an impossibility in a twenty-minute paper:

It is the privilege and duty of hospitals to extend their field of usefulness by opening their wards more freely to undergraduates in medicine, to elevate the standards of work done by nurses, interns, residents and attending staff, to foster research. By so doing they are not harming the patient, but are rather insuring him better and more skilled treatment. They are serving to enlighten and educate not only the individual, but the observing lay public as well, eager to learn and to be instructed in knowledge of medical matters.

And what concerns us as physicians looking to the elevation of the standards of medical education is that as soon as possible each medical school should have its own hospital in which the wards are freely utilizable for the instruction of undergradutes, in which a definite service in practical work in medicine and surgery shall be demanded as a prerequisite for graduation, in which assistants and residents may be in training for specialties in medicine and surgery and in which the spirit of investigation and research pervades every worker from the probationer nurse to the chief of the attending staff.

Until such medical-school hospitals are obtained the aim should be to secure similar privileges in other good hospitals, seeing to it that some authoritative supervisional check may be had on the character of work that is there done, before credit is given in the medical school for such undergraduate or intern work.

A TEACHING HOSPITAL

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A medical college without a hospital under its control, but relying on independent institutions, cannot supply ideal facilities for teaching medicine. The difficulties may be divided into two groups: (1) The arrangement is not satisfactory to the college authorities from the college standpoint; (2) the arrangement is equally unsatisfactory to the hospital authorities from the hospital standpoint.

I. DIFFICULTIES FROM THE COLLEGE POINT OF VIEW

In order that the arrangement may be satisfactory to the college, its teachers must be connected with the hospital. The professor of surgery must be, *de facto*, surgeon to the hospital. A change in the occupant of a chair in the college must mean that the new occupant acquires, by his election in the faculty, a position on the hospital staff. Only in this way can desirable men be drawn to the college, and the college be allowed the widest freedom in selecting its corps of teachers.

Again, the college must bring up clinical assistants, trained as teachers and as hospital workers; this can be done only where the two institutions are coordinated. The professor of surgery desires an assistant or a demonstrator; he wishes this man to work in the dispensaries of the hospital, to substitute in the wards, to assist at operations, etc. This rarely can be arranged unless the same governing body determines the concurrent election to the two places.

The pressure of medical teaching has reached a point at which adjustment of the curriculum is one of the most difficult problems encountered by a faculty. This obstacle is great enough when the faculty dictates the hours of hospital teaching and arranges the roster, but if the schedule must be made to conform to the convenience of a hospital over which the college authorities have no control, it becomes impossible properly to conserve the student's time. For example, in a certain Philadelphia college with a hospital attached, a professor of surgery may deliver a didactic lecture and immediately thereafter take classes in sections to the hospital; like facilities are extended to every clinical chair. Such arrangements could not be made with any detached hospital. The unity of the two institutions affords the fullest use of clinical material; this applies also to laboratories and post-mortem work, largely because the faculty can select hours for teaching. The board of trustees of the hospital being a sub-committee of the board of trustees of the college, the wishes of the college authorities are respected.

If the college desires to inaugurate some particular line of work as a part of the teaching course, the college hospital may be requisitioned for the necessary facilities, the unattached hospital practically never.

II. DIFFICULTIES FROM THE HOSPITAL POINT OF VIEW

The difficulties in affiliating an unattached or independent hospital with a college without its own hospital are even more trying to the hospital. Independent or unattached hospitals may have entirely capable visiting chiefs who either are not teachers or do not like teaching, or what is worse, may have incapable chiefs who desire teaching and consequently connive and "log-roll" for appointment in some medical college, keeping their hospital positions for the purpose of forcing election to college positions.

A member of the staff of an unattached hospital wishes to bring up his own assistant and rarely chooses a man whose time is partly given to college work unless the chief himself is a professor.

The unattached hospital is wisely shy of college affiliation; its board of governors do not desire to be restricted in their selection of officers and often oppose professorial candidates because of the impression that college work demands too much of their time.

The hospital has another group of objections that are administrative and insuperable.

1. *Expense.*—The teaching hospital is the most expensive institution to maintain. For the adequate instruction of the medical student more than one way of doing many things must be taught. The operating-rooms of teaching hospitals must be equipped for the practical presentation of many and varied technics and modes of treatment. This detail involves the selection of catgut, needles, needle holders and many surgical instruments. Each teacher desires the widest latitude in his selection of means and methods, and in order that instruction of the student may not be narrow the teaching hospital must accede. One of the best and most economically administered hospitals in Philadelphia is unattached. It has one physician-in-chief and one surgeon-in-chief, and although some teaching is done in the surgical department, the expense of supplies is measurably less than in a small hospital in which there are several visiting chiefs, and in which instruction is given on a larger scale.

2. *Nursing.*—The nursing problem in a college hospital is different from that in an independent institution. The Jefferson Hospital has over one hundred nurses, while a neighboring institution, in which teaching is restricted to fixed clinics, cares for as many patients equally well, with a staff of eighty nurses. The college hospital should supply nurses for a number of operating-rooms, and a nurse for each chief in making rounds; at one time there are as many as eight to ten nurses accompanying chiefs in visits to patients. The nurses are better trained in teaching hospitals, but complain of the increased amount of work.

3. *Operations.*—Operating service in the Jefferson Hospital reserved for class teaching requires six operating-rooms, in addition to a private operating-room, and as all are frequently in use simultaneously, a detail of eighteen to twenty-five nurses is required. The operating-rooms must be furnished, equipped and maintained —a tremendous fixed charge.

4. *Regulations.*—The unattached hospital fixes the hours for serving food, for ward-cleaning, bed-making, dressing patients, and other administrative details, and would require the affiliated college to conform to the hospital regulations; the hospital forming an integral part of a college must, as far as possible, adapt these functions to the demands of the student.

5. *Attitude of Patients.*—The unattached hospital is usually sectarian or maintained at public expense; in either case patients may decline to be used for teaching purposes, and the hospital authorities must support such action. Patients admitted to teaching hospitals usually understand that cases will be studied by the professor and his assistants, and demonstrated to students. In the rarest instances only are objections made.

6. *Increased Work.*—The teaching hospital requires a large staff of interns because accurate records, including histories, diabetic charts, blood charts, temperature charts, blood-pressure charts, food charts, etc., must be prepared for presentation to sections or to the entire class. The work thus thrown on nurses and interns is far greater than in an independent hospital, even where as much is accomplished.

7. *Discipline of Students.*—Where the teaching hospital and college are under one control the student must conform to regulations. He may, as in Jefferson, be required to wear a uniform in his hospital service. If he fails to do so he is reported to the college authorities and disciplined. His ward and class duties and his deportment are subject to the supervision of teachers for whom he has the highest respect and to whom he is directly responsible—all of these making for better results.

8. *Special Branches.*—Few general unattached hospitals provide adequate facilities for teaching specialties. Teaching hospitals must be so organized that the special branches receive adequate representation. Special hospitals for these lines of work are rarely available for teaching purposes. Each of the colleges of Philadelphia maintains its maternity department, although there are in the city a large number of fully officered institutions devoted to obstetrics. For properly teaching this branch —indeed, any branch—the didactic and practical or clinical teaching must be correlated and the organization under one head.

The Philadelphia method, an Americanization of the Continental, has never been improved on. The modern hospital is a clinical laboratory; and such a laboratory cannot be under extramural direction any more than any other laboratory. The time has passed when even an Agnew or a Keen could teach anatomy to students of the University of Pennsylvania or Jefferson in a private school of anatomy, and it is high time that medical colleges provide clinical organization, which is as much an integral part of their teaching plants as laboratories of anatomy, physiology, chemistry or pathology.

THE MICROGRAPH: A PRELIMINARY REPORT

AN INSTRUMENT THAT RECORDS THE MICROSCOPIC MOVEMENTS OF A DIAPHRAGM BY MEANS OF LIGHT-INTERFERENCE

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The following report describes an instrument which has many practical applications not only in physiology, but in physical science. Briefly stated the instrument magnifies the minute motions of a diaphragm similar to that of a telephone about 50,000 times and records these movements on a moving photographic film. It is well known that these movements are not perceptible to the unassisted eye, and they are so small that for a time it was supposed that there was no real motion of the diaphragm as a whole, but that the effect was molecular. A microscope which magnifies 2,000 times is considered a high-power microscope, but the magnification obtained in this instrument is twenty-five times this figure.

The word "micrograph," therefore, seems appropriate for this instrument, denoting something which records microscopic movements. The phenomena of the interference of light waves is made use of for the purpose of obtaining not only the high magnifying power, but something which, by the use of photography, can be made to make its own record by means of the light on a photographic film.

The complete apparatus thus consists of two distinct parts, the instrument proper, and the additional portion required when photographs are to be taken.

The instrument may be applied to the study of any subject in which it is possible to communicate the phenomena to be studied to the diaphragm so as to induce in it a motion corresponding to that being studied. Some results are given in this paper which were obtained with a diaphragm to which the motion was communicated mechanically through the medium of the air. In this manner curves have been obtained not only showing the radial pulse, the beating of the apex of the heart, and the pulse in the jugular vein, but also waves of sound from the human voice.

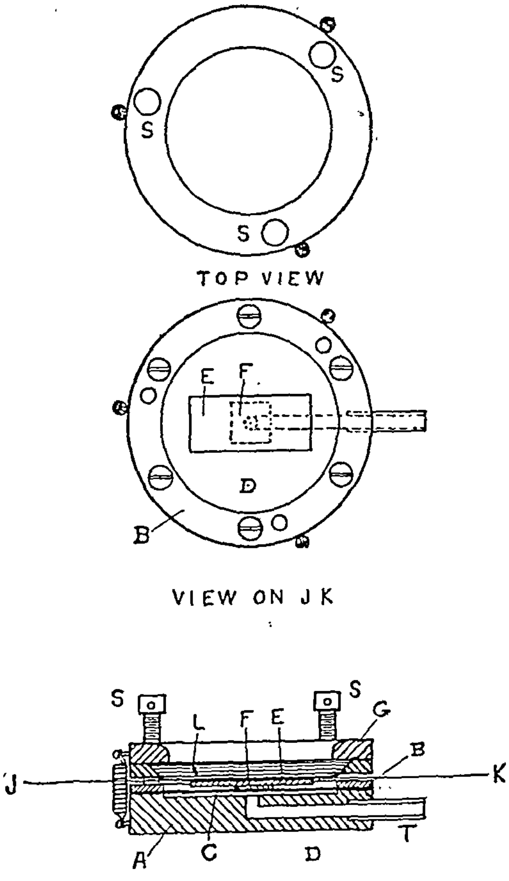

Fig. 1.—The instrument.

The form of instrument by which these records were secured is shown in Figure 1. In addition to the source of light, this instrument connected by a tube attached at the outlet, T, is all that is required for observing the motion of the diaphragm, D. An ordinary tambour is connected to the other end of the tube and placed on the patient, and the motion of the patient at the point where the tambour is applied is transmitted through the air to the diaphragm of the instrument and then, being magnified by the interference of light, becomes directly visible to the eye. Slow movements can readily be followed by the eye, but rapid vibrations require the use of photography.

In instruments heretofore in use the mass and inertia of the moving parts and the distance through which they are required to move have been considerable. Such instruments at the points of most rapid pressure-changes overshoot the mark on the upstroke and then again on the return because of the inertia. The important feature of the new instrument is that it reproduces faithfully all pressure-changes without the disturbing effect of inertia. The mass of the moving part is not only small, and the elastic force of the diaphragm large, but the distance through which it has to move is so small that it cannot be seen to move at all by the unaided eye.

INTERFERENCE METHOD

Carried at the center of the diaphragm, D, is a small reflector, E, which really forms a part of the diaphragm. Just above this and parallel to it without touching it is a cylindrical lens, L, with its plane surface nearest the reflector, E. The adjusting screws, S, are for the purpose of bringing the two surfaces into parallelism. If a source of nearly monochromatic light is held above the instrument so that an observer sees it by reflection in the two surfaces of the reflector and of the lens, a series of beautiful interference bands will be seen covering the entire surface of the reflector. These bands usually form a series of concentric circles and an image of these is readily thrown by means of a lens on the ground glass of the camera. Figure 2 is an attempt to represent this image of concentric circles as it appears on the screen of ground glass.

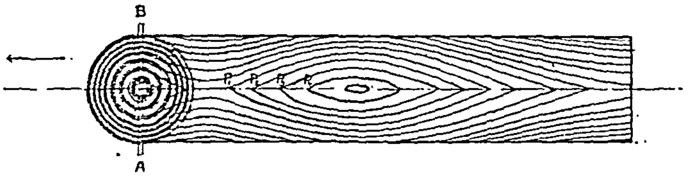

Fig. 2.—Image of circular bands and transverse slit AB, through which the light passes to make the tracings on the moving film. P, etc., are points on the plate marking the disappearance of the bands.

If, then, a slit, AB, is placed in front of the photographic plate, so as to cut off all of the light of the image except that which passes through it to the plate, and at the same time the plate is moved transversely across the slit as indicated by the arrow, the several bright spots of light along the diameter of the image included by the slit would trace straight lines on the plate, and the developed negative would show a series of straight bands from end to end of the plate if the bands remained perfectly stationary. Any movement of the diaphragm, however, changes the distance apart of the two reflecting surfaces, and this has the effect of moving the interference bands forming the image. The bands always remain circles and the center of the concentric circles remains fixed, but the diameter of each circle changes. When the two interference plates approach each other owing to an increase of pressure of air in the instrument each circle contracts and the central circles contract to zero diameter and disappear one after another. Similarly a decrease of pressure separates the plates more and expands the diameter of each band, and bands appear at the center one after another and increase in size.

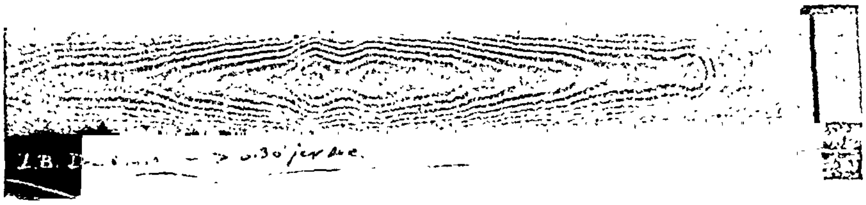

Fig. 3.—Moving bands from which the table of measurements is made and the curve in Figure 4 plotted.

Hence a simultaneous movement of the diaphragm caused by a variable pressure and the uniform movement of the photographic plate past the slit will produce a sinuous or wavy series of bands on the plate which might look like those of Figure 2. From this record an accurate curve can be drawn which shows the exact changes of pressure of the air within the chamber of the instrument which were taking place at the time the plate passed the slit. This is done as follows:

HOW TO DRAW A "PRESSURE-TIME CURVE" FROM THE NEGATIVE

When the bands are expanding there comes a time when a new band makes its appearance at the center of the system of circles and as soon as it appears it makes a record on the plate at points which are clearly seen, P_1, P_2, etc. We, therefore, have a succession of records at these points of the times when the diaphragm moves just one-half a wave-length of the particular kind of light used, for each succeeding circle appears only when the two interference plates have separated by exactly one-half wave-length. As the length of a wave of light is accurately known, it is evident that we have determined the time which the diaphragm required to move one-half wave-length, since the plate moves at a known uniform speed and distances along the plate are convertible into time if we multiply by a constant factor. The process of forming the curve is then to measure the distances to where each band appears or disappears, the second column in the table, and place opposite to each the corresponding number of the band, numbering each band consecutively. The ordinates of the curve then represent distances, the unit being the wave-length of light, through which the diaphragm has moved in the time specified.

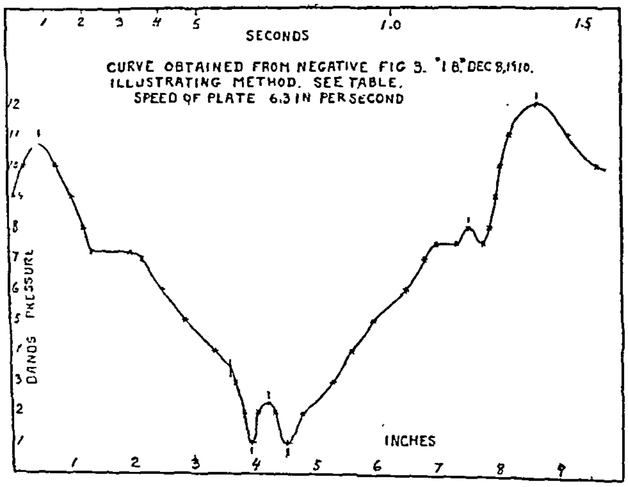

Fig. 4.—Curve plotted from Figure 3.

TABLE OF MEASUREMENTS ON NEGATIVE
"I. B., Dec: 8, 1910"
6.3" per sec.
See curve, Figure 4

Band	Inches		Band	Inches	
9	.08		2	4.32	
10	.22		1	4.52	Min.
	.52	Max.	2	4.78	
10	.79		3	5.29	
9	1.05		4	5.58	
8	1.24		5	5.95	
7.2	1.35	} Level.	6	6.50	
7.2	2.00		7	6.80	
7	2.20		7.5	7.00	} Level.
6	2.51		7.5	7.31	
5	2.89		8	7.52	Max.
4	3.34		7.5	7.76	Min.
	3.60	Sharp fall.	8	7.87	
3	3.70		9	7.96	
2	3.82		10	8.05	
1	3.94	Min.	11	8.20	
2	4.05		12	8.65	Max.
2.3	4.22	Max.	11	9.15	
			10	9.62	

To show that these ordinates are proportional to the pressure of the air in the chamber of the instrument we have only to ascertain the relation between the deflections of a diaphragm and the pressure to produce a given deflection. Measurements show that for small deflections such as a few wave-lengths of light, the deflection is strictly proportional to the pressure producing it. Hence the ordinates of our curve are strictly proportional to the pressure of the air within the chamber, and we have constructed a true pressure-time curve. If it were so desired it might be easily calibrated so that the ordinates represent pressures in millimeters of mercury, but this is usually not desired.

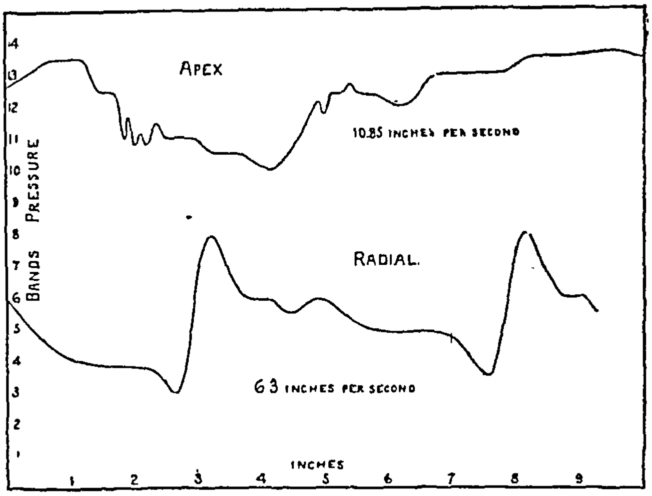

Fig. 5.—An apex and a radial tracing taken at different times on different patients.

By the process indicated the curve in Figure 4 was obtained from the photograph Figure 3, the measurements being given in the table. With some experience, however, it is not necessary to construct such a curve, as it is not difficult to recognize the form of the curve by an inspection of the negative.

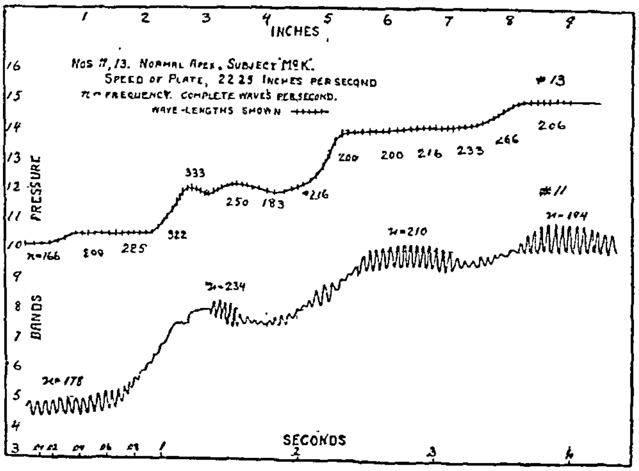

Fig. 6.—A portion of a cycle of an apex-beat. The small waves represent sound varying in both amplitude and frequency. In the upper curve the wave lengths only of the sounds are marked.

RECORDING SOUND WAVES

The highest speed of plate used in taking some of the records was 58 inches or nearly 5 feet per second. To work at these speeds requires an intense light, as the time of exposure is very short, and the negatives obtained grow less and less dense as the speed increases. There is reason to believe, however, that this speed can be more than doubled and good negatives still be secured. The time of exposure is readily calculated when the width of slit and the speed of plate are known. In this case it was 0.00086 second.

Curves have been obtained by singing the vowels "E" and "O" on the key of G in the second octave below middle C.

THE APEX-BEAT AND THE RADIAL PULSE

The upper curve in Figure 5 shows a tracing of the apex-beat obtained by plotting from the negative as detailed above, and represents about one cardiac cycle, the speed of the moving plate being 10.85 inches per second. The lower curve shows a radial pulse obtained from another subject and shows nearly two cycles, the speed of plating being 6.3 inches per second.

We know of no curves from the lever that approach the details of the events of the cardiac cycle shown in these curves. Figure 6 shows a portion of an apex cycle starting at the lowest part of the upshoot of the upper curve of Figure 5 taken at a speed of plate sufficiently rapid, 22.5 inches per second, to reproduce the sound waves which are superposed on the curve of more slowly varying pressure. We have conclusive evidence that these waves really emanate from the patient and are not due to any instrumental or other outside influence. A vibration of one band or half-wave-length in amplitude is very easy to detect if it were present when the instrument is disconnected from the patient. The bands then appear to remain at rest, but when the tambour is placed on the apex the records show that the amplitude of the waves of sound in some parts of the cycle are as great as one band, and if these were due to other causes they would certainly be seen when the instrument is disconnected. That they are not in the instrument itself is clearly shown by the figure, since the sound wave is continuously changing its pitch or frequency from point to point of the cycle. If the natural period of the instrument itself intruded so as to disturb the record there would be a tendency to vibrate always at some one definite note or frequency.

The conclusive argument is that we get the same variations in the pitch of the sound in using instruments with different diaphragms, and they repeat themselves with remarkable regularity in the various tracings. The same results are obtained with instruments having diaphragms of widely varying thicknesses. The sensitivity of the instrument is changed by substituting a different diaphragm.

THE JUGULAR VEIN AND RESPIRATORY CURVES

In addition to those mentioned curves have been obtained from the jugular vein, and they are compared with those from the bared jugular of a dog. A respiratory curve has also been secured as illustrating the various ways in which the instrument may be applied.

400 West End Avenue.

Differential Diagnosis of Cancer of the Breast.—Hardness and fixity of the tumor in the breast may be caused by a non-malignant condition. Hardness of the breast tumor may be due to a tense collection of fluid; the hardest tumor may be a cyst. A cyst surrounded by mastitis can be as fixed as any cancerous growth. The presence of enlarged glands in the axilla is of little use as an aid in the diagnosis of breast cancer. Except in late cases, it may be quite impossible to feel glandular enlargements. The hardness of the individual gland, and absence of pain on pressure, are important points. Malignant glands are generally discrete and often not of great size.—H. M. Rigby, in the *Practitioner.*

PULSATING EXOPHTHALMOS DUE TO ANEURYSM OF THE INTERNAL CAROTID

W. E. McCLELLAN, M.B., M.R.C.S. (Eng.)

HARTFORD, CONN.

History.—The patient was P. V., aged 32, a Hungarian. His past history was unimportant. Eight months ago, while at work in a foundry, the machine at which he was working upset, striking him on the chin and throwing him violently backwards. He was unconscious for twenty-four hours. A compound, comminuted fracture of the lower jaw was produced. There was considerable hemorrhage from the mouth and nose, but none from the ears. His attending surgeon wired the fragments and the patient made a complete recovery. Three months later a slight exophthalmos developed, which grew steadily worse and was very marked when the patient was admitted in the eye service of St. Francis Hospital.

Examination.—Nose and accessory sinuses were found normal. The *x*-ray examination was negative. The ear examination was also negative.

Eye: Marked exophthalmos in both eyes, especially the right. A distinct pulsation, rhythmical with the pulse, could be both seen and felt on palpation, also more marked in the right eye. The conjunctiva was very edematous and the veins were markedly dilated. The movements of the eyes were normal in all directions. The visual fields for form were normal. It was impossible to obtain the color-fields.

Vision: O. D. 20/20—3. O. S. 20/30—3.

Pupil reaction normal. Consensual reaction normal.

Fundus: The retinal veins were dilated and tortuous. The nerve-margins were indistinct. The retina was edematous, but the media were clear.

Symptoms of Aneurysm.—The patient complained of a blowing to-and-fro sound in his head, which he could not locate accurately, but which began shortly after the original injury. During the past month it became so loud that it caused him great distress. Up to the present there had been no pain. On auscultation of his head a loud bruit could be heard. It became audible over the bifurcation of the right common carotid and reached its maximum intensity about 1 inch behind the external angular process of the right frontal bone. It could be distinctly heard over the left side also, but not so markedly, and was of a different character and of a higher pitch. By compressing the right common carotid the bruit and the pulsation of the eyes could be made to disappear completely. Compression of the left carotid had no effect on either condition.

Diagnosis.—Taking into consideration the nature of the injury and the subsequent train of events, a diagnosis was made of an intracranial aneurysm or rupture of the right internal carotid.

Operation.—Ligation of the right internal carotid was advised, but the patient refused operation. He was kept under observation for a week and the condition grew rapidly worse. Severe pain developed between the eyes, the exophthalmos increased, the retinal veins became more engorged and tortuous and an early choked disk appeared. The vision dropped to 20/50 in each eye. Operation was then permitted and was performed by Dr. J. B. Boucher.

Postoperative History.—There was immediate cessation of the bruit and pulsation of the eyes and neither has since recurred. In one week the engorgement of the retinal veins and choked disk disappeared and vision returned to normal. There is a very slight congestion of the conjunctiva and no edema. The exophthalmos is slightly reduced, but still marked. This is to be expected, as a passive hyperemia having existed in the orbital cavity for so long a time has probably produced a hypertrophy of the connective tissue there which may be permanent.

I think that, in all probability, a cure has been effected.

125 Trumbull Street.

THE EXCRETION OF SALICYLIC ACID AND HEXAMETHYLENAMIN IN THE SPUTUM *

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Instructor in Medicine, University of Pennsylvania; Assisting Visiting Physician, University Hospital
PHILADELPHIA

The finding of foreign substances in the expectoration is by no means a recent observation, since bile has been found in the sputum of icteric patients, urea in the expectoration of nephritics and in one case of diabetes, glucose has been demonstrated in the sputum. This very old observation received a new point of view when Falk and Tedesko[1] endeavored to utilize this knowledge as a diagnostic test between inflammations and exudations.

Their hypothesis, briefly stated, is that, if a substance be given by mouth, and if it be absorbed and circulate in the blood, then in those pulmonary conditions in which hemorrhagic exudates are the chief feature of the morbid process, the substance should be found in the sputum. They selected sodium salicylate as the drug to be tested, giving 2 gm. in capsules and collecting the sputum for from ten to fifteen hours. The total quantity of sputum was treated in a manner to be described later. Bronchitis, pneumonia and tuberculosis were the respiratory conditions studied.

In bronchitis, no salicylic acid was regained, while in pneumonia (two cases) it was found in considerable quantities. Salicylic acid was also excreted in the sputum of pulmonary tuberculosis, but not to such a great extent as in pneumonia. They conclude that the giving of sodium salicylate to patients may be of assistance in distinguishing bronchitis from pneumonia. Other substances—antipyrin, guaiacol, etc.—were given by mouth, and all were again found in the sputum—all, however, in much smaller quantities than sodium salicylate.

TECHNIC

The patients receive 2 gm. of sodium salicylate, and the sputum is collected for from ten to fifteen hours. The total quantity is made weakly acid and shaken with five times the amount of 96 per cent. alcohol. The albuminous and mucoid substances are precipitated and then filtered off. The clear filtrate is made weakly alkaline and evaporated on a water bath, the residue taken up in water and made faintly acid and precipitated with lead acetate. The solution is filtered, the acid filtrate shaken with water and an equal volume of ether. The ethereal extract is taken up in 10 c.c. of water and 1 c.c. of a 10 per cent. solution of ferric chlorid is added, when in the presence of salicylic acid a violet color is observed.

We have followed the method of Falk and Tedesko in nineteen patients, grouped as follows, and in no case was salicylic acid regained in the sputum.

Pneumonia	6 cases
Pulmonary tuberculosis (advanced)	7 cases
Angina pectoris	1 case
Carcinoma of the lung	1 case
Failing cardiac compensation	1 case
Bronchitis	1 case
Cardiorenal	1 case
Not diagnosed	1 case
	19 cases

Inasmuch as in many of these cases blood was present, macroscopically, we should have had the most favorable circumstances for the elimination of the drug, if Falk and Tedesko are correct in their hypothesis.

As a result of these studies, however, the conclusion was reached that salicylic acid was of no value as a test in pulmonary diseases, since, if excreted at all, it is eliminated in such small quantities as to make its detection impossible. Moreover, to be of service clinically, the technic of a method should endeavor to combine simplicity and ease of application with accuracy and expediency, and the technic as described by Falk and Tedesko lacks all four requisites. In the belief that, on hypothetical grounds at least, substances should be in part eliminated by the bronchial or pulmonary tissue when diseased, hexamethylenamin was selected as a drug which might be favorably tested.

According to Crowe[2] the drug was first prepared by Butlerow in 1860. It is readily broken up by boiling in an acid medium, liberating formaldehyd, which may be easily tested for. Crowe has found the drug in the bile and pancreatic juice, in the cerebrospinal fluid[3] and also in the milk and saliva. He found the drug to be absorbed rapidly and to remain in the circulating blood for hours.

The absolute safety of administration of hexamethylenamin, and also the ease of detection, were two factors in inducing us to attempt researches on its elimination in pulmonary conditions. Twenty-five grains a day were given and the sputum was collected in bottles for twenty-four hours.

The total amount was put in an Erlenmeyer flask, diluted with water, acidified with sulphuric acid, and distilled, the distillate being collected in water in a cooled Erlenmeyer flask. The distillate was then tested for hexamethylenamin by adding to it 4 to 6 drops of milk and 3 drops of a 3 per cent. ferric chlorid solution and stratifying the mixture after agitation on concentrated sulphuric acid. At the point of contact an amethyst color is observed.

The cases in which this method was tried were:

Pulmonary tuberculosis	9	Bronchitis	1
Pneumonia	1	Asthma	1

and in all of these formaldehyd was found in the sputum. In five of the nine tuberculous cases, the sputum collected after the termination of twenty-four hours contained no hexamethylenamin.

It appears then that a new portal of excretion of this widely used drug has been discovered, in addition to the bile, pancreatic juice, urine, cerebrospinal fluid, milk and saliva. The question whether it is by the last that the sputum becomes impregnated with hexamethylenamin, or whether of itself the sputum contains formaldehyd can be, we think, decided in favor of the latter. In comparison to the amount of saliva that is swallowed the quantity which becomes mixed with the sputum must be very small, and we believe this would not account for the intense color reaction obtained. No quantitative estimations were made of the amount excreted and control examinations showed no such color reaction in the sputum.

Nicolaier,[4] from whom it received the name of "urotropin," Richardson,[5] Churchman,[6] Crowe,[2] and others, have studied the action of the drug on bacteria and have found it of greatest use in genito-urinary and biliary infections. We have not had opportunity to study its

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* From the Laboratory of Dr. John H. Musser.

[1] Falk and Tedesko: Wien. klin. Wchnschr., 1909, p. 954.

[2] Crowe: Bull. Johns Hopkins Hosp., 1908, p: 109.

[3] Crowe: Bull. Johns Hopkins Hosp., 1909, p. 102.

[4] Nicolaier: Centralbl. f. d. med. Wissensch., 1894, xxxii, 897; Deutsch. med. Wchnschr., 1895, p. 541.

[5] Richardson: Jour. Exper. Med., 1899, iv, 19.

[6] Churchman: Johns Hopkins Hosp. Rep., 1906, xiii, 189.

action on pulmonary conditions, but believe that it might be used to advantage in certain respiratory conditions.

CONCLUSIONS

As a result of our work we draw the following conclusions:

1. Salicylic acid is excreted, if at all, in the sputum in such small quantities as to make it useless in the diagnosis of pulmonary conditions.

2. Hexamethylenamin, when given by mouth, is excreted in the sputum of tuberculosis, pneumonia, bronchitis and asthma.

3. There seems to be no selective action in the excretion of the drug, and the detection of formaldehyd in the sputum cannot be used diagnostically.

Clinical material was secured from patients of Drs. S. Solis-Cohen, Riesman and Ashton of the Philadelphia General Hospital, Dr. Landis of the Phipps Institute, and Dr. Musser of the Presbyterian and University hospitals. To these gentlemen and to Drs. Rehfuss and Jackson, resident physicians in the University and Philadelphia hospitals respectively, we wish to express our thanks for cooperation in this work.

248 South Twenty-First Street.

AN OBSCURED ALCOHOLIC MULTIPLE NEURITIS IN A CASE APPARENTLY OF FRANK OPIUM ADDICTION

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PITTSBURG, PA.

History.—Nov. 20, 1910, Miss M., aged 32, was brought in an ambulance to the hospital for treatment for drug addiction —"the laudanum habit," she phrased it. She complained of nervousness, diarrhea and vomiting. The picture presented was emphatically that of the opium addict: the facies typical, narcomania pronounced, atrophy of breasts, cessation—for more than a year—of menstruation. There was no history of alcoholism.

Personal History.—The patient was one of a family of four children; family history negative except for alcoholism in the father. She appeared fairly well nourished and no organic lesion was evident. She could stand on her feet for but a few minutes at a time and was ataxic. She was unable to sleep and suffered with severe abdominal cramps, except when under the influence of the narcotic. She had a poor appetite, having been a small eater since using the drug in large amount. She seemed possessed of good intellect, but stated that she was in a continuous state of terror, agitation and foreboding. She expressed great remorse on account of her habit, but was afraid she would die if the drug were discontinued.

History of Drug Habit.—Fifteen years previously, on advice of a fellow sufferer from dysmenorrhea, the patient began the use of Squibb's Diarrhea Mixture. Thirty drops was the original dose, taken several times daily during the menstrual period. This was continued for one year. Then an increase of dosage ensued with a more or less continuous use of the mixture. A gradual increase in amount and decrease in intervals followed and during the previous six years the patient had been taking from 4 to 6 ounces of the preparation daily. She was getting the equivalent of from 3 to 4 grains of morphin every day.

Treatment.—A rapid withdrawal of the drug was indicated and was instituted the second day after admission. On the third day of treatment her narcotic, as well as the occasional substitution of morphin, was discontinued. Veronal was used during the following week, when sleep came naturally. Toward the end of the second week, the patient began to show considerable restlessness and complained of numbness and burning of hands and feet; gradual loss of power in both soon followed, with great tenderness over the nerve-trunks and muscles of the extremities. The diagnosis of multiple neuritis was now made; but just why it should have occurred was difficult to explain, until the large alcoholic content of the diarrhea mixture was recognized.

Squibb's Diarrhea Mixture[1] consists of the following:

Tr. opium	m. vi.	(content of alcohol, 91 per cent.)
Tr. capsicum	m. iii.	(content of alcohol, 48 per cent.)
Spts. camphor	m. vi.	(content of alcohol, 93 per cent.)
Chloroform	m. iiss.	(content of alcohol, 1 per cent.)
Alcohol	m. xivss.	(content of alcohol, 95 per cent.)

Total alcoholic content, 83.1 per cent.

In the mixture the patient had been getting, for six years, from 3 to 4 ounces of alcohol daily. The patient's inability to stand and her ataxia, mentioned in the history, now became significant as of alcoholic origin. These had been, in the first diagnosis, passed over as merely symptomatic of opium addiction, the case seemed to be so clearly one of that addiction alone. On closer investigation into the history of the case, the significant fact was now brought out that on the morning before admission the patient had been frightened into hurrying to the hospital, because on attempting to get out of bed her legs had refused to support her. This fact, had it been known, would have pointed to an oncoming neuritis, of probable alcoholic etiology. The seemingly well-nourished condition of this patient, unusual in an opium habitué with a habit of such long duration, seemed now attributable to the food value of the alcohol regularly consumed.

Outcome.—The neuritis progressed rapidly; complete paralysis of hands and feet, with characteristic hand- and wrist-drop, was present at the end of the third week. Muscular atrophy of the extremities became progressively more marked to the end of the third month. Most of the classic symptoms and signs of multiple neuritis, involving sensory, motor and trophic centers, appeared during the course of the disease. Mental symptoms were not present, nor did any joint adhesions occur. The patient slept well, ate heartily, and was cheerful. Two months after the onset, faint motor power became possible in the index-finger of the right hand. This inaugurated a gradual return of muscular ability, which has advanced steadily but slowly to the time of making this report —four and one-half months from time of the patient's entrance to the hospital. The ankle-drop was still complete, but on April 1, for the first time, the patient was able to stand, being partly supported by the nurse. The weight increased steadily during the previous six weeks, the muscles were regaining their former size, menstruation was reestablished five weeks after treatment began and recurred normally, and the breasts returned to more normal size. The original tremor of hands and tongue disappeared, but the deep reflexes (notably the plantar and patellar) were still completely absent. The urine on admission contained hyaline and granular casts (not in great numbers), acetone and albumin; on April 4 it was normal. The hemoglobin ranged between 80 and 85 per cent.

This has seemed to me to be an especially interesting case, owing to the etiologic factors which may have contributed to the inducement of the neuritis. The patient's anemia, produced by the opium, presented favorable soil for the development of neuritis; and in addition to the deleterious effects of this drug on metabolism, we must take into account the probable injury produced by the chloroform in the mixture. An amount of chloroform varying from 1 to 2 drams was ingested daily. Now, any substance which interferes with the oxygenizing processes of the blood, must lower resistance to other toxic substances such as alcohol. In the blood chloroform is carried, for the most part, by the red cells, and is said to retard the reduction of oxyhemoglobin (Cushny). It is well known that chloroform will produce fatty degenerative changes throughout the body, its effects on metabolism resembling closely those of phosphorus poisoning. It is to be noted, too, in connection with this case, that the effects of this drug are especially marked when it is taken into the stomach because of the slower absorption and consequent more prolonged action. An additional reason for emphasizing the chloroform factor is the fact that it belongs to the same narcotic group as alcohol—the methane series—and produces similar effects.

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[1] Based on N. F. The formula differs slightly in Squibb's "Materia Medica."

116 Dithridge Street.

MYASTHENIA GRAVIS

FRANK W. ACKER, M.D.

DENVER

I am reporting this case because of the rarity of the disease and to assist the profession in the diagnosis, should they meet with this condition. Some text-books do not mention it.

It is, as the name implies, a grave asthenia or fatigue of the musculature of the body, due to an exhausted condition of the nervous system. In this case, I did not make the diagnosis, but thought it a case of bulbar paralysis, so I called several consultants to help me out; but none of them had ever heard of such a condition, until Dr. Hall was called. He immediately recognized it as myasthenia gravis.

ETIOLOGY AND PATHOLOGY

The etiology is obscure, but several theories are held. One theory is that it is produced by a toxin in the blood which causes the fatigue. Another theory is that it follows infections which cause a toxic neuritis. Link believes that it is due to lymphorrhagia into the muscles, interfering with the lymphatic circulation, thus preventing the removal of fatigue products; but the majority of men seem to support the toxic theory.

The pathologic changes are mainly in the muscles, the nervous system being apparently normal in most cases. There occurs between the muscle fibers a lymphorrhagia, consisting of small lymphoid cells about again as large as red blood-cells; occasionally cells of larger type are found.

REPORT OF CASE

Patient.—M., aged 16, white, was of negative family history. The patient was a well-built girl for her age, with good color, and a well-developed body. She had always had the best of health until March, 1910. At that time she attended a dance in a very light gown, came out into the cold air in a very heated condition and rode home several miles. Since that time the symptoms enumerated below appeared and grew rapidly worse.

Symptoms.—Diplopia, ptosis of upper lids, difficult swallowing and chewing, collection of food in the cheeks, inability to control movements, especially after any kind of exercise; difficult respiration and tachycardia; difficult speech and pronunciation; weakness of neck muscles, causing the patient to rest her head against something; inability to cross knees; a lack of ambition and complaint of becoming tired after any small amount of exercise.

Course of Disease.—The patient's muscles became stiff, and it became more difficult for her to perform any movement. She felt very much better in the morning after she had rested during the night. The urine was negative. The patient died from dyspnea and cardiac failure the same night that Dr. Hall was called in.

DIAGNOSIS, PROGNOSIS AND TREATMENT

I regarded the case as one of bulbar palsy, as it had so many of the symptoms of that condition; in fact, bulbar paralysis is a part of this disease. Besides the typical symptoms of this disease, in the diagnosis the myasthenic reaction can be used, which consists in the electrical examination of the muscles. If a rapidly intermittent current be applied to the affected muscles, they respond well at first, but rapidly the contractions become less, until there is no response; this according to the degree of asthenia in the affected muscles.

The prognosis in these cases is, as a general rule, unfavorable. From one year to two years is the usual length of time the patient lives. My patient, from the time of the first symptoms, lived nine months.

In the treatment of this condition the following points should be observed:

1. All infections and toxic agents should be removed. 2. The patient should take rest. 3. Special attention should be paid to elimination. 4. Tonics such as strychnin and arsenic should be administered. 5. The diet should be of the highest concentration and easy of mastication, as the patient cannot chew and swallow well.

St. Joseph's Hospital.

OPERATION FOR PEDUNCULATED EXOSTOSIS OF THE EXTERNAL AUDITORY MEATUS

S. B. MUNCASTER, M.D.

WASHINGTON, D. C.

Exostoses of the auditory canal are at times as hard as ivory; it is almost impossible to cut them with the sharpest instrument or to drill them with the keenest burr.

A simple and easy method is to make a notched tooth saw out of No. 1 snare wire, or No. 1 piano wire. A piece of such wire twelve inches long is placed on a hard board and nicked obliquely one inch in the center of it, about 100 times. For this purpose, a sharp, heavy knife is used, the blade of which is not brittle. This will make sharp teeth that will saw through the hardest bone.

An application of cocain, 4 per cent., and solution of epinephrin, 1 to 1,000, is made to contract the tissues and for local anesthesia. The canal is washed with solution of bichlorid of mercury, 1 to 5,000, using an ear syringe.

The wire tooth saw must be adjusted around the growth with an ear snare handle. After it is adjusted the assistant holds the wire in place while the operator withdraws the snare handle. The ends of the wire are then twisted around two pieces of wood—one and a half inches long and about one-fourth inch in diameter—for handles.

The base of the growth is then sawed through and removed with a pair of forceps. It is advisable to saw slowly to prevent heat and breaking of the wire. When the base is wider than the body of the growth this wire tooth saw will not be of any service.

If the patient is disposed to be nervous, an anesthetic should be administered.

907 Sixteenth Street.

Intracranial Complications of Middle Ear Disease.—A point of importance in diagnosis of intracranial complications secondary to middle ear disease, says W. Taylor in the *Practitioner*, is that when sinus infection is associated with any other intracranial complication, such as cerebral abscess, the phenomena of the sinus infection predominate, and signs characteristic of the other complaint will only manifest themselves after the sinus trouble has been removed by operation.

Therapeutics

ACUTE ENTERITIS OF ADULTS AND OLDER CHILDREN

There is perhaps danger of over-refinement in giving separate descriptions to disorders affecting different localities of the digestive tract. There are mentioned gastritis, duodenitis, jejunitis, ileitis, typhlitis, colitis, sigmoiditis, and proctitis, but three divisions are certainly convenient; gastritis, enteritis and colitis. While these are not mutually exclusive, the symptoms indicative of disorders of these three divisions of the alimentary canal are certainly distinctive. Duodenitis may be associated, and often is, with gastritis, and enteritis and colitis also are closely connected.

It may also seem an excess of refinement to give separate descriptions to enteritis as it occurs in individuals of different ages, but the disease as it affects infants is so different in its etiology, symptomatology and management from enteritis affecting older children and adults, that to discuss them separately is not only convenient, but practical.

The common causes of acute enteritis are the ingestion of an excessive amount of food, or of food which is not in proper condition to be eaten. In this latter class are included unripe fruit, over-ripe fruit, vegetables, meats and other articles which are not fresh or which may have already commenced to undergo decomposition. It may also be caused by a chilling of the surface of the body, such as becoming uncovered in bed at night when an open window allows the wind to blow on the body, or by chilling of the feet through dampness or through inadequate shoes and socks. Various forms of secondary enteritis, such as may be observed in typhoid fever, cholera, and tuberculosis, must be mentioned in order to make the account complete, but these secondary types will not be discussed in this connection.

The most common and the most important symptoms of acute enteritis are pain and diarrhea. Either of these symptoms may appear before the other, or they may appear coincidently. Other characteristic symptoms are tenderness over certain portions of the abdomen, distention of the intestines with gas, and rumbling noises or borborygmi caused by the movements of gas and fluid from one part of the intestines to another.

When a physician is called to a patient suffering with pain and diarrhea, the first question which arises in his mind is whether to relieve the pain at once by administering an anodyne, or to remove the cause of the trouble by administering a cathartic. If the disease is due to the eating of an excessive amount of food or to improper food and the diarrhea has not been so abundant as to render it probable that the original offending matter has been thoroughly removed from the intestine, and if the pain is not severe, it is certainly wise to commence treatment by the administration of a cathartic. The best of all drugs for this purpose is castor oil, which may be administered in a dose of 15 c.c. (½ an ounce, a tablespoonful) in black coffee or in lemon juice. If for any reason (as, for example, a great distaste of the patient for the drug) it seems better to give some other medicine, the sulphate of magnesium may be selected. This may be given in a dose of 15 grams (½ an ounce) with a little ginger and water, and should be repeated in three hours, if in that time it has not acted thoroughly. A dose of calomel (2 or 3 grains) with bicarbonate of sodium (from 5 to 0 grains) may be given instead of the above, if deemed advisable, but for the condition described the castor oil, or Epsom salt, or Rochelle salt is better. After the intestine has been well emptied, or at the beginning of treatment, if the pain is excessive, morphin should be administered for the relief of the pain. If the pain was so great that it has seemed wise to give an anodyne before giving the cathartic, a hypodermatic injection of ¼ grain of sulphate of morphin and 1/150 of a grain of sulphate of atropin may be given to an adult. Another hypodermatic injection of morphin alone, ⅛ of a grain, should be given in an hour, if the pain is not entirely relieved. After the pain has been relieved and after the patient awakens from sleep, if this has followed the hypodermatic injection, the cathartic should be given in accordance with the principles already laid down.

If the pain is not severe, or if, for any reason, it seems unwise to give the patient morphin, other drugs may be employed. The spirit of chloroform is useful for this purpose. It may be combined with other carminatives and anodyne drugs, as, for instance, in the following prescription:

℞	Gm. or c.c.		
Spiritus *chloroformi*............	5		*fl.* ʒiss
Tincturæ *cardamomi comp.*........	25	*or*	*fl.* ℥i
Spiritus vini gallici..........*ad*	100		*ad fl.* ℥iv

M. et Sig.: Two teaspoonfuls, *in water, every hour.*

While these medicines are being administered internally, or while they are acting, external applications should be made to the abdomen. Perhaps nothing is more useful than a mild mustard paste, made in the following way: Mix two tablespoonfuls of flour with sufficient hot water to make a paste, then mix thoroughly with this paste one tablespoonful of ground mustard. Spread this on a cloth and apply to the middle of the abdomen. After this has thoroughly reddened the skin, it may be removed and a hot flaxseed poultice may be substituted for it. If the severity of the symptoms is not sufficient to warrant the trouble involved in the preparation of this application, a rubber bag, partly filled with hot water, may be applied to the abdomen. If this is not at hand, several thicknesses of flannel, heated in the oven, may be applied.

Although all irritation and fermentation may cease after the clearing out of the bowels and the stopping of the peristaltic cramps, still it is generally wise to soothe the irritated membrane with bismuth, and stop fermentation with salol, as:

℞	Gm. or c.c.		
Bismuthi *subcarbonatis*..........	10		ʒiiss
Phenylis *salicylatis*..............	3	or	*gr.* xlv

M. et fac *chartulas* 10

Sig.: One powder *every two hours.*

In the after-treatment, the matter of food is of great importance. It is wise to withhold all solid food entirely for several hours after the attack and until the intestine has been thoroughly emptied and the pain has entirely ceased. At first only warm drinks should be given. A little warm water may be given at intervals of from one-half an hour to an hour, and a little later warm milk may be given at intervals of two hours. When the active symptoms have entirely subsided, solid food may be administered. This also should be given warm. One of the best forms of solid food for early administration is a soft boiled egg, or a coddled egg, prepared by cooking, after it has been opened, in hot water. Next to this is a small piece of fresh meat; a broiled lamb chop, a piece of broiled steak, a piece of rare roast beef, or roast lamb may be given. A little later the patient may be allowed stale bread with a little butter, a small baked potato, or a little thoroughly boiled rice. Boiled or baked custard made with milk and eggs may also be allowed. These foods are almost entirely digested in the stomach, with the exception of the rice, bread and potato, and even these are partially digested in the stomach if they are thoroughly chewed. Articles of food which are not digested in the stomach should not be allowed until the patient has thoroughly recovered from the enteritis, and then they should be taken only gradually and in small amounts. Among these foods are included especially fruits and vegetables, which should be taken only after several days, and at first in small amounts and not frequently.

Persons who are susceptible to attacks of acute enteritis should be particular always to protect the body by suitable and adequate clothing. Warm stockings and heavy shoes should keep the feet from the cold and damp ground, and woolen underclothing should be used, except possibly in the very warmest weather in the middle of summer. Care should be taken to avoid unripe and over-ripe fruit and vegetables, meats and other articles of food which are not fresh. Excessive eating and too rapid eating should always be avoided. The individual who eats a moderate amount of food of good quality and avoids exposure to cold will rarely be troubled with acute enteritis.

WARTS—VERRUCA

A wart is an over-growth of a papilla of the corium of the skin. It consists of one or more vascular loops surrounded and held together by connective tissue which is covered by a layer of epithelial cells. It is common on the hands of young people and on the genital organs of young adults.

The cause of the abnormal growth has not been definitely established. In some instances it appears to be associated with some disturbance of the nervous system. At other times it would appear to be associated with auto-intoxication accompanying constipation. In still other cases, local irritation seems to give rise to it; and in the opinion of some writers it is due to the action of bacteria.

In the majority of persons the presence of a few warts gives rise to so little trouble that they will not devote the time and attention necessary to their successful treatment. In the occasional cases in which the patient really desires to get rid of the trouble, the treatment should be both general and local. If there are evidences of auto-intoxication, as indicated by intestinal fermentation and constipation, repeated small doses of sulphate of magnesium will often prove beneficial. The dose may range from 5 or 10 grains (0.30 or 0.60 gram) for a child to ½ dram or 1 dram (2 or 4 grams) for an adult, given dissolved in water, on an empty stomach, once, twice, or three times a day. If there are signs of intestinal putrefaction, as shown by indican in the urine, a saline alkaline cathartic should not be selected, as it tends to prolong rather than stay the condition. A castor oil purge, then vegetable laxatives should be selected.

In other cases, particularly if the patient is nervous and anemic, Fowler's solution of arsenic may be given in doses of 1 or 2 drops for a child, and 3 or 4 drops for an adult, given diluted in water, three times a day, after eating.

If there is indigestion, as indicated by flatulence and a coated tongue, without constipation, dilute hydrochloric acid, given in doses of from 5 to 10 drops, well diluted with water, after meals, may prove useful.

The external treatment generally proves more interesting to the patient. It is commonly observed that the warts frequently disappear without treatment, perhaps on account of some change in manner of life, or on account of increased cleanliness. One of the most satisfactory methods of treating small warts, when not very numerous, is by direct application, strictly limited to the wart itself, of glacial acetic acid. Sometimes bathing the warts with a strong solution of salicylic acid or of boric acid, or of resorcin, will result in their removal.

In many cases, however, the most satisfactory method is by removing them with a knife, curved scissors, or a curette. If such operative measure is undertaken, the wart and the surrounding skin should be carefully cleansed by means of a bichlorid of mercury solution. The wart may be anesthetized by a spray of ethyl chlorid. It is then seized with a pair of forceps and gently lifted up, when it may be cut off, either with a knife or a pair of curved scissors. It is generally well to curette the base of the wound after removal of the wart. If there is much hemorrhage, it can usually be stopped by pressure, or by the application of a solution of sulphate of iron. If the bleeding stops by pressure, the wound should be touched with phenol (carbolic acid) and dressed with a dry dusting powder, such as boric acid or 1 per cent. salicylic acid in talcum powder. The nitrate of silver stick (or a 25 per cent. solution) may be substituted for the phenol for treatment of the wound left after excision.

When the warts occur about the genital organs they are usually due to purulent discharges, or to excessive mucous or sebaceous secretions. In these cases great attention to cleanliness is always essential. Bathing with a strong bichlorid of mercury solution is useful, but it will frequently be necessary to excise them. An excellent dusting powder for use in these cases is composed of the following:

℞	Gm.		
Zinci oxidi......................			
Acidi tannici			
Hydrargyri chloridi mitis.... .aa	5	or	āā ʒi

M. et Sig.: Apply externally.

To prevent a return of these genital warts daily bathing with peroxid of hydrogen solution and the free use of talcum powder are generally efficient.

Operation and Sunshine in Treatment of Tuberculous Peritonitis.—The details of seventy-one operative cases are tabulated by Y. Takaki to emphasize the well-known advantages of a long median incision and exposure of the intestine and omentum to the sunlight for twenty minutes after evacuation of the ascites. The temperature may run up after operation for a few days but subsides harmlessly. He does not attempt to operate when the temperature is already high, but waits for it to subside, the final outcome being better. A second operation became necessary in two of his patients, and the nodules and adhesions found at the first operation had all vanished. His communication is published in the *Sei-i-kwai*, March 10, 1911, page 19. His youngest patient was 8 and the oldest 54 years old; in twenty-three of his sixty-seven cases the onset was sudden and stormy, suggesting acute appendicitis or peritonitis in some instances. There was complicating acute peritonitis in one case, extensive intestinal hemorrhage in two. Complicating pulmonary lesions were benefited by the operation in some cases. On the whole the outlook for the ascitic form is seen to be good, and fair for the fibrous form, while there is little hope in the ulcerative form.

STATE BOARD STATISTICS FOR 1910

THE ANNUAL PRESENTATION BY THE COUNCIL ON MEDICAL EDUCATION OF RESULTS OF STATE BOARD EXAMINATIONS

On pages 1566 to 1575 will be found three tables, A, B and C, giving in detail the results of the various state medical license examinations held during 1910. Complete reports were received from all states.

Tables A and B have been arranged so that, read from left to right, they give the results by colleges, showing the number of graduates appearing for examination in each state, whether they passed or failed, the total number examined during the year, the number who passed, the number who failed, the percentage of failures and the number of states in which graduates of each school appeared for examination. Read from above downward, they give the results by states, showing the number registered and rejected from each college, the total number examined, the total number registered, the total number rejected and the percentage of rejections. The fact that the majority of graduates take the license examination in the state in which the college is located is shown by the dark diagonal zone made by the grouping of figures, passing from the upper left to the lower right corner of each table. This shows also that the states which harbor low-grade medical schools are themselves the recipients of the greater portion of the ill-trained output of such schools. These tables are worthy of much careful study, for many important deductions are possible.

Caution in Forming Conclusions

In making comparisons on the basis of these statistics several factors should be carefully considered. The number examined is important since, if all other conditions are equal, the larger the number of graduates examined, the more accurate is the finding. But other conditions are seldom equal. The number of states in which a school's graduates have been examined is important. The larger this number the more accurate will be the conclusions. Again, the character of the board making the examination and the methods employed are important factors to be considered, since some boards hold very careful examinations and include practical laboratory and clinical tests, or they may mark the papers more severely, while others, especially partisan boards, may be very lenient. In this connection it should be stated that although conditions are undergoing a steady improvement it is still true that the character of the license examination as usually conducted at the present time is such that graduates of colleges conducted largely by quiz-class methods may easily be successful in passing them. Therefore, the statistics herewith presented should be taken only as part of any investigation of medical schools, although it is an important part.

Graduates of All Years Examined in 1910.

Table A shows the results for all candidates who took examinations in 1910, regardless of the years in which they graduated. This shows that altogether 7,004 were examined last year, as compared with 7,287 in 1909; 7,770 in 1908, and 7,271 in 1907. Of those examined 18.4 per cent. failed, as compared with 1[illegible].6 per cent. in 1909; 21.7 per cent. in 1908, and 21.3 per cent in 1907.

There were 121 medical colleges in the United States which still grant degrees and which had graduates examined. Foreign graduates were examined in 20 states, the total number being 108. The largest number of foreigners examined in any state was 41 in New York. Graduates of Canadian schools were examined in 25 states, more appearing naturally in the border-line states. The figures for the Canadian colleges are given separately in order to show the number of candidates coming from each as well as to show the successes of their graduates at the examinations. Altogether 112 candidates from Canadian colleges were examined, of which number 18, or 16.1 per cent. failed. Of all Canadian colleges, the University of Toronto had the largest number examined. Laval University has the highest percentage of failures. There were no failures recorded for graduates from McGill, or from the University of Manitoba.

Undergraduates Examined During 1910

Line 130 of Table A shows the number of non-graduates examined in four states during 1910. Altogether 353 non-graduates were examined, of which number 161 or 45.6 per cent. failed. North Carolina is required by an amendment to its practice act to register non-graduates, who are permitted to practice only in the sparsely settled mountain districts. The open door for these candidates still remains only in Massachusetts, Mississippi, Oregon and Tennessee, and the percentages of failures in these states this year for non-graduates were respectively, 87.3, 70.9, 0.0, and 15.0. The largest number registered was in Tennessee where, out of the 315 candidates registered during the year in that state, 142, or 45.1 per cent., were non-graduates.

Recent Graduates Examined During 1910

Table B gives the results for graduates of 1906 to 1910, inclusive, which were examined during 1910. This table is particularly important, since it deals with recent graduates and is, therefore, the fairest basis for comparison between colleges. The fairest estimate of a medical college from the standpoint of failures at state board examinations would be obtained from this table. Of all candidates examined in 1910, 5,678, or 80.7 per cent., were recent graduates, and of this number 14.9 per cent. failed, as compared with 18.4 per cent. for all candidates. The figures for medical schools which have ceased to exist either through merger or otherwise have been included in the line for miscellaneous colleges.

Old Practitioners Examined During 1910

Table C is so arranged as to show in comparison the results for graduates of all years (first column), for recent graduates (second column), the graduates of 1905 and previous years (third column), and the graduates of 1910 (fourth column). Of the graduates of 1905 and previous years, or "old practitioners," 973 were examined and of this number 283, or 29.1 per cent. failed, as compared with 14.9 per cent. of failures for recent graduates. This high percentage of failures is probably due chiefly to the long time these candidates have been out of college and to the fact that they are required to take the same examination as recent graduates. Justice to such candidates, most of whom have already been licensed, but who, for good reasons, may desire to change their locations. is the strongest argument for interstate reciprocity in medical licensure, or for special percentage allowances at the examinations for years of practice. The total number of these

Total Results
Comparison with Previous Years

	Table A				B		C		A		K	
Year.	Examined.	Total Examined—Passed.	Examined—Failed.	Percentage Failed.	Recent Grads. Examined.	Percentage Failed.	Older Pract. Examined.	Percentage Failed.	Non-Grads. Examined.	Percentage Failed.	Regist'd Without Written Examination.	Total Registered.
1904	7035	5672	1363	19.3	4773	14.1	579	29.7	515	52.6	900	6671
1905	7170	5680	1490	20.8	6054	16.2	690	37.7	472	61.9	394	6074
1906	8035	6368	1667	20.7	6250	16.4	793	27.1	703	51.3	1497	7865
1907	7271	5723	1548	21.3	5922	15.1	675	27.7	674	69.6	1426	7149
1908	7770	6084	1686	21.7	6477	17.8	796	31.5	494	56.8	1276	7360
1909	7287	5857	1430	19.6	5891	15.4	958	30.0	438	54.1	1373	7230
1910	7004	5712	1292	18.4	5678	14.9	973	29.1	353	45.6	1640	7352

candidates will naturally diminish each year as increased reciprocal relations are established, since, as a rule, the states which do not have reciprocal relations with other states (e. g., California, Florida, Washington, see Table L) examined the largest numbers of old practitioners.

TABLE D.—COLLEGES GROUPED BY STATES
Showing the Number Examined and Percentage of Failures

All Colleges of	Graduates.								State Rank According to the Number Examined.	Rank According to Successes at Examinations.
	Of 1910.		Of 1906 to 1910.		Of 1905 and Previous.		Of all years.			
	Number Examined.	Per Cent. Failed.	Number Examined.	Per Cent. Failed.	Number Examined.	Per Cent. Failed.	Number Examined.	Per Cent. Failed.		
Alabama	56	26.8	81	25.9	2	50.0	83	26.5	20	27
Arkansas	36	33.3	44	34.1	....	.....	44	34.1	25	30
California	43	9.3	76	14.5	11	36.3	87	17.2	16	20
Colorado	9	0.	14	0.	1	0.	15	0.	33	1
Connecticut	9	0.	24	4.2	4	0.	28	3.6	30	3
District of Columbia	25	4.0	97	21.6	13	7.7	110	20.0	15	23
Georgia	147	7.5	174	13.2	8	50.0	182	14.8	10	18
Illinois	539	8.7	722	12.5	104	21.2	826	13.6	1	17
Indiana	56	1.8	60	5.0	....	.....	60	5.0	24	5
Iowa	87	2.3	103	4.9	17	23.5	120	7.5	13	10
Kansas	33	0.	37	2.7	3	66.7	40	7.5	26	10
Kentucky	199	19.6	229	23.1	13	38.4	242	24.0	8	26
Louisiana	101	6.9	116	6.9	10	0.	126	6.4	12	7
Maine	22	9.1	24	8.3	8	0.	32	6.7	29	8
Maryland	279	16.5	404	18.1	48	37.5	452	20.1	6	24
	133	9.0	240	15.8	30	20.0	270	16.3	7	19
	121	1.7	142	2.8	31	16.1	173	5.2	11	6
	31	9.7	67	10.4	17	5.9	84	9.5	19	15
	15	53.3	23	52.2	....	.....	23	52.2	31	32
Missouri	360	8.9	461	17.6	49	42.9	510	20.6	4	25
Nebraska	66	1.5	79	2.5	7	28.6	86	4.7	17	4
New Hampshire	7	0.	21	4.8	1	100.0	22	9.1	32	14
New York	271	9.3	475	6.9	54	16.7	529	7.9	3	11
North Carolina	41	36.6	63	12.8	3	66.7	66	43.9	22	31
Ohio	168	8.3	188	10.1	24	37.5	212	13.2	9	16
Oklahoma	....	....	....	....	....	.....	....	....	....	....
Oregon	16	12.5	32	15.6	1	100.0	33	18.2	28	21
	451	5.1	591	6.9	80	10.0	671	7.3	2	9
	41	29.3	58	27.6	3	33.3	61	27.9	23	28
	285	23.2	410	28.0	56	42.9	466	29.8	5	29
	73	0.	82	0.	3	33.3	85	1.2	18	2
Vermont	17	11.8	30	6.7	5	20.0	35	8.6	27	13
Virginia	74	4.1	101	7.9	11	9.1	112	8.0	14	12
Wisconsin	48	18.7	63	20.6	5	0.	68	19.1	21	22
Totals Examined in 1910	3875	10.7	5331	14.1	622	24.8	5953	15.3	....	....

This table gives data relating to the group of colleges in each state. For example, it shows that of all the medical schools in New York 529 graduates of various years were examined by state boards during 1910, of which number 7.9 per cent. failed. Of the 475 who graduated in recent years, however (1906 to 1910 inclusive), 6.9 per cent. failed, while of the 54 who graduated previous to 1906, 16.7 per cent. failed.

The ninth column gives the rank of each state group of colleges according to the number of applicants. The Illinois group of colleges leads, having 826 graduates examined by state boards during 1910, followed by Pennsylvania with 671, New York with 529, Missouri with 510 and Tennessee with 466.

The tenth column gives the rank of each state group of colleges according to the success of the graduates at state board examinations. It is interesting to compare the figures of these two last columns. While the Illinois group ranks first according to the number examined it ranks seventeenth in the success of its graduates at examinations. While Pennsylvania ranks second as to the number examined, it ranks ninth in the success of its graduates at examinations and while Tennessee ranks fifth as to the number examined, it ranks twenty-ninth in the success of its graduates at examinations

Graduates of 1910 Examined During 1910

Table C also gives the results for the graduates of 1910 who were examined during the year by state boards, and shows that 3,976 or 56.5 per cent. of all candidates examined during the year graduated in 1910. Educational statistics show that the medical colleges of the United States graduated 4,440 students last year; therefore, about 90 per cent. of all graduates in 1910 took examinations for license during that year. In some of the states graduates in medicine are allowed to serve hospital internships without first becoming licensed practitioners, which doubtless accounts for some of the remaining 10 per cent. Of those examined 432, or 10.9 per cent., failed.

Table C permits of an interesting study of medical schools from the standpoint of state board examinations. For some colleges, the percentages of failures are high for old practitioners but much less for recent graduates and for graduates of 1910. Other colleges, however, show no improvement either for recent graduates, or for graduates of 1910. In the latter instance a knowledge of these colleges, based on a careful study and which included inspections of the colleges, bears out what the figures of this table indicate, that some of these institutions are teaching medicine no better to-day than they did years ago.

Results for Larger Colleges
Comparison with Previous Years (Table E).

Year.	Colleges Represented.	Total Examined.	Per Cent. Failed.	Colleges, 100 or More Examined.	Total Examined.	Per Cent. Failed.	Colleges, 50 to 100 Examined.	Total Examined.	Per Cent. Failed.	Colleges, Less than 50 Examined.	Total Examined.	Per Cent. Failed.	Foreign and Non-grads. Examined.	Per Cent. Failed.
1904	149	6241	16.4	14	2271	11.7	28	1817	16.9	107	2153	21.0	794	43.1
1905	153	6411	18.3	14	2350	12.4	37	2543	17.7	102	1518	28.9	759	51.1
1906	146	6938	17.3	16	2504	14.5	34	2381	16.9	96	2043	21.3	1097	42.5
1907	146	6207	13.8	12	1626	12.7	36	2578	14.7	98	2003	13.6	1064	55.5
1908	137	6491	17.2	19	2596	15.6	26	1825	15.5	92	2070	20.8	1270	44.6
1909	149	6341	16.2	17	2476	16.9	27	1920	12.3	90	1945	19.2	946	42.6
1910	121	5953	15.3	17	2379	13.3	25	1791	13.7	79	1753	19.3	573	37.9

Study of Totals and Percentages

A study of totals and percentages as compared with previous years is of interest. The total examined and the percentage of failures, shown in Table A, are the lowest since the compiling of these statistics was begun in 1904. The total examined in 1910 shows a decrease of 1,031 below 1906, when 8,035 candidates were examined.

Other deductions from the larger tables have been made and are presented in Tables D to M, which are worthy of careful study.

Study of Colleges by State Groups

Table D is based on the first four large tables and gives the results for the group of colleges located in each state. It shows what states are furnishing the largest numbers of physicians and the failure percentages indicate what kind of training these colleges are furnishing, so far as may be judged from the failures of their graduates before state boards. By comparing the percentages of the first column with the other columns it can be seen whether there has been any reduction in failures for graduates of recent years. Of the 34 states having medical colleges which grant degrees, 15 furnished 100 or more candidates examined. Of these 15 groups of colleges, 6 had failure percentages of less than 10 per cent.; 4 had failure percentages between 10 and 20, and 5 had over 20 per cent. of failures. The highest failure percentage was obtained by the Mississippi group. Of the states having 100 or more candidates examined, however, the highest failure percentage was obtained by the Tennessee group, which had 29.8 per cent., followed by the Kentucky group, with 24.0 per cent. Other deductions are given with the table.

Study of Larger Colleges

Table E is also based on the three large tables and gives the results of state board examinations as they affect the 42 largest medical colleges. Although these colleges represent less than one-third of the medical colleges in the United States, they furnish nearly two-thirds of all the candidates for license. This table shows that the graduation of large classes by a medical college does not prove excellence of teaching since several colleges having 100 or more examined have very high failure percentages and this holds true even for the graduates of 1910. In fact, the larger the college from the standpoint of the number of students and graduates the more serious is inferior teaching ability, indicated by a high failure percentage. In fairness to the medical student, and in the interests of the public, such schools should greatly strengthen their teaching facilities or reduce the size of their classes.

Altogether for these schools 563, or 13.4 per cent., failed, as compared with 19.2 per cent. of failures for the 1783 candidates from the 79 colleges having less than 50 each examined.

Besides the graduates of the medical colleges of the United States, 1,051 candidates were examined, made up of 112 graduates of Canadian colleges, 108 foreign college graduates, 478 graduates of miscellaneous colleges and 353 non-graduates. Of these 1,051 candidates, 384, or 36.5 per cent., failed.

Results in Home States and Elsewhere

Table F is of much interest, because it shows for each college the results of examinations in the state where the college is located, as compared with the results of examinations in other states, where there is no possibility of local influence. Of all recent graduates examined in 1910, 3,191, or about 60

TABLE E.—COLLEGES HAVING FIFTY OR MORE EXAMINED

Table Shows Total Number Examined, Percentage of Failures and Number of States in Which Each College Had Representatives

College.	Graduates, All Years.			Graduates of 1906-1910.			Graduates, 1905 and previous.			Graduates of 1910.			Margin Number.
	No. Examined.	Per Cent. Failed.	No. States.	No. Examined.	Per Cent. Failed.	No. States.	No. Examined.	Per Cent. Failed.	No. States.	No. Examined.	Per Cent. Failed.	No. States.	
University of Louisville, Medical Department	236	22.5	27	223	21.5	24	13	38.4	11	194	18.0	19	40
Northwestern University Medical School	206	5.3	20	185	4.9	17	21	9.5	11	136	2.2	11	30
University of Pennsylvania, Department of Medicine	196	2.6	29	164	2.4	25	32	3.1	15	124	1.6	16	100
College of Physicians and Surgeons, Chicago	185	14.1	24	154	14.3	20	31	12.9	15	120	3.3	15	25
Jefferson Medical College	174	4.6	33	149	2.7	31	25	16.0	13	105	0.	20	97
Memphis Hospital Medical College	135	31.1	13	118	30.5	10	17	35.3	9	99	26.3	8	106
Chicago College of Medicine and Surgery	133	12.0	18	131	11.5	17	2	50.0	2	108	8.3	11	23
Rush Medical College	130	7.7	21	90	0.	16	40	25.0	15	65	0.	9	32
Tulane University of Louisiana, Medical Department	120	5.0	16	110	5.5	13	10	0.	8	97	5.2	10	42
University of Maryland, School of Medicine	116	20.7	21	107	20.6	18	9	22.2	6	85	20.0	13	48
Columbia University, College of *Physicians and Surgeons*	116	0.9	20	100	1.0	16	16	0.	10	43	2.3	7	74
St. Louis University, School of Medicine.—R.	109	4.6	14	106	2.8	13	3	66.7	2	90	0.	8	65
Universities of Nashville and Tennessee, Medical Department	109	22.9	21	90	16.7	16	19	52.6	12	53	11.3	10	109
Baltimore *Medical Department*	108	24.1	25	95	20.0	22	13	53.8	8	57	10.5	11	44
Meharry Medical College	103	42.7	17	99	42.4	17	4	50.0	4	65	36.9	15	107
Tufts College Medical School	102	9.8	10	96	9.4	8	6	16.7	4	61	8.2	5	52
University of Michigan, Department of Medicine and Surgery	101	5.9	16	80	1.2	11	21	23.8	11	67	0.	7	55
Harvard Medical School	99	5.1	25	84	3.6	22	15	13.3	11	43	0.	9	51
Washington University, Medical School	95	3.2	8	92	3.3	8	3	0.	3	88	3.4	5	68
Barnes Medical College	90	31.1	18	77	28.6	17	13	46.2	8	60	25.0	13	61
Medico-Chirurgical College of Philadelphia	87	13.8	16	75	13.3	10	12	16.7	10	69	11.6	7	98
College of Physicians and Surgeons, Baltimore	85	15.3	20	75	12.0	17	10	40.0	8	59	13.6	16	45
Johns Hopkins University, Medical Department	84	1.2	24	74	0.	22	10	10.0	7	44	0.	16	46
University and Bellevue Hospital Medical College	84	6.0	14	77	2.6	8	7	42.9	7	43	2.3	4	82
Atlanta College of Physicians and Surgeons	81	11.1	6	78	10.7	5	3	33.3	3	69	5.8	5	17
Long Island College Hospital	80	13.7	8	76	14.5	4	4	0.	4	41	14.6	3	78
State University of Iowa, College of Medicine	78	7.7	10	67	5.9	9	11	18.1	6	54	3.7	4	35
Cornell University Medical College	76	0.	13	72	0.	9	4	0.	4	50	0.	3	75
University of Pittsburgh, Medical Department	75	12.0	3	75	12.0	3	..	....	..	60	8.3	2	101
St. *Louis College of Physicians and Surgeons*	67	41.8	18	56	48.2	14	11	9.1	8	19	15.8	5	66
University Medical College, Kansas City	67	17.9	14	56	12.5	8	11	45.5	9	51	7.8	7	67
University of Minnesota, College of *Medicine* and Surgery	65	7.7	9	50	8.0	9	15	6.7	7	20	10.0	3	57
Hahnemann Medical College and Hospital, Philadelphia	63	14.3	15	56	14.3	13	7	14.3	6	39	12.8	7	96
Medical College of the State of South Carolina	61	27.9	6	58	27.6	6	3	33.3	3	41	29.3	6	103
Milwaukee Medical College, Dept. of Medicine of Marquette University	61	21.3	6	56	23.2	5	5	0.	3	44	20.5	6	120
Indiana University School of Medicine	60	5.0	7	60	5.0	7	..	....	..	56	1.8	6	33
Atlanta School of Medicine	59	17.0	8	59	17.0	9	..	....	..	50	12.0	8	18
Maryland Medical College	59	45.8	13	53	43.4	10	6	66.7	5	34	44.1	9	47
Hahnemann Medical College and Hospital, Chicago	57	17.5	19	49	14.3	16	8	37.5	6	28	7.1	5	26
Vanderbilt University, Medical Department	55	9.1	19	45	6.7	17	10	20.0	8	26	7.7	12	111
John A. Creighton Medical *College*	53	1.9	8	50	2.0	8	3	0.	2	42	2.4	3	69
Albany Medical College	50	6.0	8	42	7.1	2	8	0.	6	26	11.5	1	73
Totals	4170	13.4	..	3709	12.5	..	461	19.1	..	2735	10.0	..	...

This t [illegible] interesting, since it gives data relating to the 42 larger medical colleges arranged according to the number of graduates [illegible] ows of comparisons between colleges having classes of nearly equal size. This time as in 1909 the University of Louisville [illegible] had the largest number examined, which place was held in 1908 by Jefferson Medical College and in the three previous years by the College of Physicians and Surgeons of Chicago.

Of the 17 colleges having 100 or more examined, 9 have failure percentages of less than 10, while 6 stand out prominently with large failure percentages of 20.7, 22.5, 22.9, 24.1, 31.1 and 42.7. This marked *difference* holds even in respect to recent graduates (of 1906 to 1910, *inclusive*).

Of the 25 colleges having between 50 and 100 graduates examined, 11 had failure percentages of less than 10; 9 had failure percentages between 10 and 20 and 5 had failure percentages above 20, the 3 highest having 31.1, 41.8 and 45.8 per cent.

The *average percentage* of failures for these larger colleges for graduates of 1905 and previous years, was 19.1; for *graduates of* 1906 to 1910 inclusive (recent graduates), 12.5; for graduates of 1910, 10.0 and for graduates of all years, was 13.4. Of the 42 colleges, 23 obtained failure percentages below the average. Of the 6,431 college graduates examined by state boards in 1910, these larger schools *furnished 4,170, or* 64.8 per cent.

TABLE F.—COMPARISON OF RESULTS IN HOME STATES AND ELSEWHERE. BASED ON TABLE B.

College.	Total Examined.	Results in Home State.			Results in Other States.		
		Passed.	Failed.	Per Cent. Failed.	Passed.	Failed.	Per Cent. Failed.
ALABAMA.......... —17.9	**61**	**45**	**19**	**29.7**	**15**	**2**	**11.8**
Birmingham Medical College	35	22	9	29.0	3	1	25.0
University of Alabama	46	28	10	30.3	12	1	7.7
ARKANSAS.......... + 9.0	**44**	**20**	**9**	**31.0**	**9**	**6**	**40.0**
College of Physicians and Surgeons......	21	5	6	54.5	6	4	40.0
University of Arkansas	23	15	3	16.7	3	2	40.0
CALIFORNIA.......... —16.2	**76**	**57**	**11**	**16.2**	**8**	**0**	**0.**
California Eclectic Medical College........	3	2	1	33.3	....	....	....
College of P. and S., Los Angeles........	16	11	2	15.4	3	0	0.
College of P. and S., San Francisco......	18	11	5	31.3	2	0	0.
Cooper Medical College..........	21	16	2	11.1	3	0	0.
Hahnemann Medical Coll. of the Pacific..	5	4	1	20.0	....	....	....
Oakland Coll. of Medicine and Surgery...	3	3	0	0.	....	....	....
University of California	10	10	0	0.	....	....	....
COLORADO.......... —	**14**	**12**	**0**	**0.**	**2**	**0**	**0.**
University of Colorado	14	12	0	0.	2	0	0.
CONNECTICUT.......... + 8.3	**24**	**12**	**0**	**0.**	**11**	**1**	**8.3**
Yale Medical School	24	12	0	0.	11	1	8.3
DISTRICT OF COLUMBIA.......... — 7.5	**97**	**25**	**9**	**26.5**	**51**	**12**	**19.0**
George Washington University	33	15	2	11.8	14	2	12.5
Georgetown University	25	6	2	25.0	16	1	5.9
Howard University	39	4	5	55.6	21	9	30.0
GEORGIA.......... +31.5	**174**	**101**	**0**	**0.**	**50**	**23**	**31.5**
Atlanta College of Phys. and Surgs......	78	53	0	0.	17	8	32.0
Atlanta School of Medicine	59	35	0	0.	14	10	41.7
Georgia College of Eclectic M. & S.......	5	....	....	....	5	0	0.
Hospital Medical College, Atlanta.......	7	....	....	....	7	0	0.
Medical College of Georgia..........	25	13	0	0.	7	5	41.7
ILLINOIS [illegible] + 3.6	**722**	**445**	**57**	**11.4**	**187**	**33**	**15.0**
[illegible]	45	23	8	25.8	9	5	35.7
[illegible]	131	91	9	9.0	25	6	19.4
College of Medicine and Surg., Ph.M....	21	8	8	50.0	4	1	20.0
College of Phys. and Surgs., Chicago....	154	94	13	12.1	38	9	19.1
Hahnemann Med. College and Hospital...	49	25	4	13.8	17	3	15.0
Hering Medical College	10	3	2	40.0	4	1	20.0
Jenner Medical College	20	15	4	21.1	1	0	0.
National Medical University	6	1	5	83.3	....	....	....
Northwestern University Medical School..	185	119	1	0.8	57	8	12.3
Reliance Medical College	11	7	3	30.0	1	0	0.
Rush Medical College	90	59	0	0.	31	0	0.
INDIANA.......... +31.4	**60**	**53**	**1**	**1.9**	**4**	**2**	**33.3**
Indiana Univ., School of Medicine........	60	53	1	1.9	4	2	33.3
IOWA............ [illegible]	**103**	**82**	**1**	**1.2**	**16**	**4**	**20.0**
Drake University [illegible]	25	23	0	0.	1	1	50.0
State Univ. of I [illegible]	67	50	1	2.0	13	3	18.7
State Univ. of Iowa, Homeopathic Dept..	11	9	0	0.	2	0	0.
KANSAS.......... +14.3	**37**	**30**	**0**	**0.**	**6**	**1**	**14.3**
Kansas Medical College	14	12	0	0.	2	0	0.
Univ. of Kansas, School of Medicine......	23	18	0	0.	4	1	20.0
KENTUCKY.......... +10.9	**229**	**90**	**19**	**17.4**	**86**	**34**	**28.3**
Louisville National Medical College.......	6	0	1	.100	1	4	80.0
University of Louisville, Med. Dept.......	223	90	18	16.7	85	30	26.1
LOUISIANA [illegible] + 2.3	**116**	**63**	**4**	**5.9**	**45**	**4**	**8.2**
[illegible]	6	1	2	66.7	3	0	0.
[illegible] ment...	110	62	2	3.1	42	4	8.7
MAINE.......... +50.0	**24**	**20**	**0**	**0.**	**2**	**2**	**50.0**
Medical School of Maine..........	24	20	0	0.	2	2	50.0
MARYLAND.......... — 0.5	**404**	**93**	**21**	**18.4**	**238**	**52**	**17.9**
Baltimore Medical College	95	21	2	8.7	55	17	23.6
College of Physicians and Surgeons.......	75	11	1	8.3	55	8	12.7
Johns Hopkins University	74	20	0	0.	54	0	0.
Maryland Medical College	53	5	8	61.5	25	15	37.5
University of Maryland	107	36	10	21.7	49	12	19.7
MASSACHUSETTS.......... — 5.8	**240**	**123**	**27**	**18.0**	**79**	**11**	**12.2**
Boston University	24	13	0	0.	10	1	9.1
College of Physicians and Surgeons......	36	6	18	75.0	5	7	58.3
Harvard Medical School	84	42	2	4.5	39	1	2.5
Tufts College Medical School...	96	62	7	10.1	25	2	7.5
[illegible] . . + 0.7	**142**	**110**	**3**	**2.7**	**28**	**1**	**3.4**
[illegible]	35	33	1	2.9	1	0	0.
[illegible]	6	4	2	33.3	....	....	....
Univ. of Michigan, Dept. of M. & S......	80	60	0	0.	19	1	5.0
Univ. of Michigan, Homeopathic College.	21	13	0	0.	8	0	0.
MINNESOTA [illegible] — 5.0	**67**	**35**	**5**	**12.5**	**25**	**2**	**7.5**
[illegible] S......	50	31	4	11.4	15	0	0.
[illegible]	17	4	1	20.0	10	2	16.7
[illegible] —32.9	**23**	**8**	**11**	**57.9**	**3**	**1**	**25.0**
[illegible]	23	8	11	57.9	3	1	25.0
MISSOURI [illegible] +11.2	**461**	**146**	**18**	**11.0**	**231**	**66**	**22.2**
[illegible]	6	3	2	40.0	1	0	0.
[illegible]	77	15	5	25.0	40	17	29.8
Eclectic Medical University, Kansas City..	9	....	....	....	6	3	33.3
Ensworth Medical College	31	7	3	30.0	12	9	42.9
Kansas City Hahnemann Medical Coll...	28	4	0	0.	19	5	20.8
St. Louis University	106	42	0	0.	61	3	4.7
St. Louis Coll. of Physicians and Surgs..	56	11	5	31.3	18	22	55.0
University Medical College, Kansas City..	56	16	3	15.8	33	4	10.8
Washington University	92	48	0	0.	41	3	6.8
NEBRASKA.......... +13.3	**79**	**64**	**0**	**0.**	**13**	**2**	**13.3**
John A. Creighton Medical College......	50	39	0	0.	10	1	9.1
Lincoln Medical College	15	11	0	0.	3	1	25.0
University of Nebraska	14	14	0	0.	0	0	....
NEW HAMPSHIRE.......... + 7.2	**21**	**7**	**0**	**0.**	**13**	**1**	**7.2**
Dartmouth Medical School	21	7	0	0.	13	1	7.2
NEW YORK.......... — 3.2	**475**	**373**	**30**	**7.4**	**69**	**3**	**4.2**
Albany Medical College	42	38	3	7.3	1	0	0.
Columbia Univ. Coll. of P. & S..........	100	65	1	1.5	34	0	0.
Cornell University Medical School.......	72	64	0	0.	8	0	0.
Eclectic Medical College, New York.......	12	6	4	40.0	2	0	0.
Fordham University	2	2	0	0.	0	0	0.
Long Island College Hospital..........	76	60	9	13.0	5	2	28.6
N. Y. Homeopathic Med. Coll. & Hosp...	25	17	4	19.0	4	0	0.
N. Y. Med. Coll. & Hosp. for Women....	2	0	2	.100	0	0	0.
Syracuse University	27	21	3	12.5	3	0	0.
University and Bellevue Hospital........	77	65	1	1.5	10	1	9.1
University of Buffalo	40	35	3	7.9	2	0	0.
NORTH CAROLINA.......... +26.2	**63**	**15**	**5**	**25.0**	**21**	**22**	**51.2**
Leonard School of Medicine	45	5	3	37.5	17	20	54.0
North Carolina Medical College..........	18	10	2	16.7	4	2	33.3
OHIO.......... +22.1	**188**	**140**	**8**	**5.4**	**29**	**11**	**27.5**
Cleveland College of Phys. and Surgs....	20	19	0	0.	1	0	0.
Cleveland Homeo. Medical College........	9	4	1	20.0	4	0	0.
Eclectic Medical College	30	7	2	22.2	10	11	52.4
Ohio-Miami Medical College	44	35	4	10.3	5	0	0.
Pulte Medical College	5	3	0	0.	2	0	0.
Starling-Ohio Medical College	45	42	1	2.3	2	0	0.
Toledo Medical College	9	9	0	0.	0	0	0.
Western Reserve University	26	21	0	0.	5	0	0.
OREGON.......... —21.8	**32**	**18**	**5**	**21.8**	**9**	**0**	**0.**
Willamette University	11	7	1	12.5	3	0	0.
University of Oregon	21	11	4	26.7	6	0	0.
PENNSYLVANIA.......... + 3.7	**591**	**336**	**23**	**4.1**	**214**	**18**	**7.8**
Hahnemann Medical College and Hosp...	56	27	4	12.9	21	4	16.0
Jefferson Medical College	149	59	0	0.	86	4	4.4
Medico-Chirurgical College of Phila.......	75	56	8	12.5	9	2	18.1
Temple University	35	32	3	8.6	....	....	....
University of Pennsylvania [illegible]	164	87	2	2.2	73	2	2.7
University of [illegible]	75	59	6	9.2	7	3	30.0
Woman's Med. [illegible]	37	16	0	0.	18	3	14.3
SOUTH CAROLINA.......... + 7.2	**58**	**34**	**12**	**26.1**	**8**	**4**	**33.3**
Med. Coll. of the State of So. Carolina..	58	34	12	26.1	8	4	33.3
TENNESSEE.......... +22.8	**410**	**117**	**17**	**12.7**	**178**	**98**	**35.5**
Coll. of Physicians and Surgs., Memphis..	21	6	2	25.0	8	5	38.4
Knoxville Medical College	4	1	0	0.	0	3	.100
Memphis Hospital Medical College.......	118	33	2	5.7	49	34	41.0
Meharry Medical College	99	17	7	29.2	40	35	46.7
Tennessee Medical College	24	19	1	5.0	1	3	75.0
Univ. of Nashville and Tennessee........	90	29	4	12.1	46	11	19.3
University of West Tennessee..........	9	2	1	33.3	2	4	63.7
[illegible]	45	10	0	0.	32	3	8.6
[illegible] —	**82**	**72**	**0**	**0.**	**10**	**0**	**0.**
[illegible]	9	8	0	0.	1	0	0.
[illegible]	21	19	0	0.	2	0	0.
[illegible] College.	16	11	0	0.	5	0	0.
[illegible]	36	34	0	0.	2	0	0.
[illegible] + 0.9	**30**	**15**	**1**	**6.3**	**13**	**1**	**7.2**
[illegible]	30	15	1	6.3	13	1	7.2
[illegible] +16.4	**101**	**61**	**1**	**1.6**	**32**	**7**	**18.0**
[illegible]	39	28	0	0.	11	0	0.
[illegible]	31	20	0	0.	11	0	0.
[illegible]	31	13	1	7.2	10	7	41.2
[illegible] +41.0	**63**	**45**	**7**	**13.5**	**5**	**6**	**54.5**
[illegible]	56	39	7	15.2	4	6	60.0
Wisconsin Coll. of Phys. and Surgeons...	7	6	0	0.	1	0	0.
Totals.......... + 9.9	**5331**	**2867**	**324**	**10.2**	**1710**	**430**	**20.1**

In this table the number of graduates examined in the state in which the college is located are grouped in one column, while graduates of that college examined in other states are in another column. For example, under Maryland, this table shows that, of the 95 graduates of Baltimore Medical College examined by State Boards during 1910, 23 were examined in Maryland of which number 21 passed and 2, or 8.7 per cent. failed, while 72 were examined in other states of which number 55 passed and 17, or 23.6 per cent. failed. This table shows that the graduates have better chances of passing examinations in the state in which their colleges are located than they have elsewhere. This should always be considered in making comparisons between colleges. A college having a low standard, by having all its graduates examined in the home state, may sometimes show a lower percentage of failures than a college of much higher grade which has graduates examined by several states.

The heavy-faced figures give the results by states. The first column of heavy-faced figures shows the differences between the percentages of examinations in the home state and the examinations elsewhere. The plus sign indicates that graduates have better chances of success in the state where the colleges from which they graduated are located; the minus sign indicates that the chances are better elsewhere. The most marked variations in 1910 were in the examination of the graduates of the colleges of Maine, 50.0 per cent., of Wisconsin, 41.0 per cent., of Georgia, 31.5 per cent. and of Indiana, 31.4 per cent., in all of which the chances of the graduates were better in the home state. The marked variations where the graduate's chances were better elsewhere were in Mississippi, 32.9 per cent., Oregon, 21.8 per cent., and in California, 16.2 per cent. The totals show that on the average the chances of success were 9.9 per cent. better if the graduate took the examination in the state where his college was located.

per cent., took their license examinations in the state where the colleges from which they graduated were located. Of this number only 10.2 per cent. failed on the average, whereas, of the 2,140 candidates examined in other states, 20.1 per cent. failed. This would indicate that as a rule the student's chances of passing the license examination are better if he stays in the college's home state. In this connection it is interesting to note that not a single graduate of any one of the Nebraska colleges failed in the Nebraska examinations, although of the graduates of these colleges who were examined in other states, 13.3 per cent. failed. The student's chances for success at home and elsewhere were equal or nearly so in 5 instances; they were better in the home state in 21 instances, while in only 8 instances the student's chances were better if he went to some other state.

TOTAL RESULTS FOR FIVE YEARS

Table G shows, so far as reports were obtainable, the number registered and the number rejected in each state for each of the past five years. A comparison of this table with the statistics in the last educational number of THE JOURNAL (Aug. 20, 1910, p. 682), shows what would be expected, that the states having the largest number of medical graduates examine the largest numbers of physicians. In 1906 several states registered all of the majority of their applicants on the presentation of satisfactory credentials without written examinations. Now, only one state, New Mexico, will register candidates on presentation of a diploma, without examination. This table shows only those registered by examination. Another table (K) shows the total registration by all methods.

CLASSIFICATION OF COLLEGES

Tables H, I and J give a classification of the medical colleges of the United States on the basis of the failures of their graduates at state board examinations during the past year. This classification is based on the examination of *recent graduates*, as shown in Table B. In forming conclusions, the caution already given should be observed, of noting the number examined, the number of states in which representatives appeared, the character of the board making the examination and the character of the examination. To form a more exact judgment one should compare the percentage of failures received by any college this year with those received in the classifications published in previous years. Careful investigation shows that a college cannot be considered a high-grade medical school merely because its graduates occasionally show a low percentage of failures at state board examinations. The fact is, several poorly equipped and low-standard colleges appear in the first list. On the other hand, some good schools appear in the second list. For the majority of colleges, however, the classification is fairly accurate. A comparison of this classification with that based on the actual inspection of the colleges by the Council on Medical Education will be of interest (see THE JOURNAL A. M. A., June 18, 1910, p. 2062).

Table H gives a list of 57 colleges which obtained failure percentages below 10 per cent., 24 of which had no failures whatsoever and 42 had only 5 per cent. or less. The failure percentage for the entire group was 3.5. Table I shows 22 colleges whose failure percentages were between 10 and 20 per cent., of which number 11 had percentages below that for the group, which was 13.7. Table J includes 42 colleges having failure percentages of 20 per cent., or above, of which number 25 had above 30 per cent., 14 had above 40 per cent. and 8 had percentages of 50 per cent., or higher. The average percentage for all candidates from this group of colleges was 31.9.

A comparison of the classification this year with those of previous years shows an increase in the number of colleges having above 20 per cent. of failures and a decrease in those having between 10 and 20 per cent. It will be interesting to note the changes in these totals hereafter as state boards more generally adopt the use of practical examinations.

CLASSIFICATION OF COLLEGES
Comparison with Previous Years (Tables H, I, J).

	Colleges Having Less than 10 Per Cent.	Colleges Having 10 to 20 Per Cent.	Colleges Having Above 20 Per Cent.	Unclassified Colleges.	Total Colleges.
1904	47	27	38	37	149
1905	45	22	40	46	153
1906	62	24	43	20	149
1907	64	27	39	18	148
1908	48	29	46	15	138
1909	58	31	38	7	134
1910	57	22	42	0	121

TABLE G.—PHYSICIANS EXAMINED BY STATE BOARDS, 1906 TO 1910, INCLUSIVE

State.	1906		1907		1908		1909		1910		Totals.			
	Registered.	Rejected.	Registered.	Rejected.	Registered.	Rejected.	Registered.	Rejected.	Registered.	Rejected.	Examined.	Rejected.	Registered.	Percentage Rejected.
Alabama	138	22	142	38	66	66	7	20	94	64	657	447	210	32.0
Arizona	35	4	29	2	36	4	19	6	15	9	159	134	25	15.7
Arkansas	152	73	72	106	120	85	111	131	96	28	974	551	423	43.4
California	190	44	118	84	145	96	184	73	204	47	1,185	841	344	29.0
Colorado	...	...	50	6	52	14	36	15	48	5	226	186	40	17.7
Connecticut	84	28	64	17	67	16	52	13	69	18	428	336	92	21.5
Delaware	11	1	4	2	11	0	19	2	21	2	73	66	7	9.6
Dist. of Col.	63	34	59	37	53	36	46	21	32	13	394	253	141	35.8
Florida	66	7	72	8	79	10	70	12	102	15	441	389	52	11.8
Georgia	164	5	139	22	150	14	143	28	148	9	822	744	78	9.5
Idaho	42	12	38	7	52	16	54	23	47	24	315	233	82	26.0
Illinois	748	69	580	52	646	96	645	117	631	100	3,684	2,250	434	11.8
Indiana	228	12	172	17	172	7	102	3	97	9	819	771	48	5.9
Iowa	166	29	146	26	139	43	98	14	113	4	778	662	116	15.0
Kansas	180	27	125	14	116	18	121	20	66	25	712	608	104	14.6
Kentucky	52	13	48	19	107	61	120	18	119	35	592	446	146	24.7
Louisiana	133	14	153	7	145	29	121	33	104	34	773	656	117	15.1
Maine	80	8	74	4	92	11	55	10	73	5	412	374	38	9.2
Maryland	112	44	139	41	132	71	130	33	131	32	865	644	221	25.6
								95	197	100	1,685	1,144	541	32.1
								2	131	3	721	696	25	3.5
								25	76	22	564	426	138	24.4
								154	84	150	1,488	665	823	55.3
								70	181	23	1,431	1,009	422	29.5
								23	73	24	363	250	113	31.1
Nebraska	58	25	68	14	103	16	74	8	80	0	446	383	63	14.1
Nevada	2	0	10	1	17	0	9	0	12	1	52	50	2	3.8
New Hampshire	34	17	19	11	37	16	20	10	34	8	206	144	62	30.1
New Jersey	80	13	73	15	89	17	76	12	63	17	455	381	74	16.3
New Mexico	...	...	5	3	30	2	11	4	6	1	62	52	10	16.1
New York	629	56	691	54	679	73	566	72	515	72	3,407	3,080	327	9.6
North Carolina	87	41	111	20	95	26	111	18	79	15	603	483	120	19.9
North Dakota	60	10	49	4	52	10	41	6	42	5	279	244	35	12.6
Ohio	222	16	179	9	182	6	192	13	172	10	1,001	947	54	5.3
Oklahoma	95	28	...	...	34	10	92	44	100	42	445	321	124	27.9
Oregon*	65	56	62	56	43	63	95	50	93	55	638	358	280	43.9
	[illegible]	73	465	54	485	49	474	27	451	52	2,649	2,394	255	9.6
		30	36	23	29	17	23	10	23	10	255	165	90	35.3
		13	41	17	47	21	46	33	61	44	362	234	128	35.4
		11	23	5	58	6	60	21	52	9	271	219	52	19.2
		96	133	140	213	87	277	4	315	52	1,467	1,088	379	25.8
Texas	[illegible]	53	187	64	143	23	181	19	162	5	996	832	164	16.5
Utah	37	7	26	0	27	5	28	4	34	4	172	152	20	11.6
	[illegible]	0	40	7	45	6	38	2	21	1	195	179	16	8.2
		35	124	33	128	53	136	40	122	14	808	633	175	21.7
		45	163	38	182	60	148	49	154	43	1,019	784	235	23.1
West Virginia	84	72	92	9	102	18	105	10	88	25	605	471	134	22.3
Wisconsin	52	2	62	5	80	7	56	13	71	7	355	321	34	9.6
Wyoming	12	3	7	5	7	2	12	0	10	0	58	48	10	17.1
Totals	8,035		7,271		7,770		7,287		7,004		37,367			
Registered	6,368		5,723		6,084		5,857		5,712		29,744			
Rejected	1,667		1,548		1,686		1,430		1,292		7,622			
Per Cent. Rej.	20.7		21.3		21.7		19.6		18.4		20.4			

This table gives the number of candidates registered by examination by each state during each of the last five years, as well as the number rejected. The last four columns give the totals for the five years and the percentage rejected by each state.

Six states registered over 1,000 candidates by examination, these being Illinois, Massachusetts, Missouri, New York, Pennsylvania and Tennessee. Over 3,000 were registered in Illinois and New York. Of the 1,088 candidates registered in Tennessee in the last five years, 322, or 29.6 per cent., were non-graduates.

The highest percentage of rejections was 55.3 in Mississippi, followed by Oregon, Arkansas and District of Columbia, with 43.9, 43.4, and 35.8, respectively. The states marked with an asterisk (*) included non-graduates among those examined, and for that reason would be expected to have higher percentages rejected.

The lowest failure percentages were in Michigan, 3.5; Nevada, 3.8; Ohio, 5.3, and Vermont, 8.2.

TABLE H.—COLLEGES HAVING LESS THAN 10 PER CENT. OF FAILURES BEFORE STATE BOARDS IN 1910. BASED ON TABLE B.

College	Total Examined.	Number Passed.	Number Failed.	Per Cent. Failed.	No of States.
CALIFORNIA					
Cooper Medical College	21	19	2	9.5	3
Oakland College of Medicine and Surgery	3	3	0	0.	1
University of California, Medical Dept	10	10	0	0.	1
COLORADO					
University of Colorado, Medical Department	14	14	0	0.	3
CONNECTICUT					
Yale Medical School	24	23	1	4.2	6
GEORGIA					
Georgia Coll. of Eclectic Medicine and Surg.	5	5	0	0.	2
Hospital Medical College, Atlanta	7	7	0	0.	1
ILLINOIS					
Northwestern University, Medical School	185	176	9	4.9	17
Rush Medical College	90	90	0	0.	16
INDIANA					
Indiana University, School of Medicine	60	57	3	5.0	7
IOWA					
Drake University, College of Medicine	25	24	1	4.0	3
State University of Iowa, Coll. of Medicine	67	63	4	5.9	9
State University of Iowa, Homeopathic Dept.	11	11	0	0.	3
KANSAS					
Kansas Medical College	14	14	0	0.	3
University of Kansas, School of Medicine	23	22	1	4.4	3
LOUISIANA					
Tulane University, Medical Department	110	104	6	5.5	13
MAINE					
Medical School of Maine	24	22	2	8.3	4
MARYLAND					
Johns Hopkins University, Medical Dept	74	74	0	0.	22
MASSACHUSETTS					
Boston University School of Medicine	24	23	1	4.2	7
Harvard Medical School	84	81	3	3.6	22
Tufts College Medical School	96	87	9	9.4	8
MICHIGAN					
Detroit College of Medicine	35	34	1	2.9	2
University of Michigan, Dept. of Med. and S.	80	79	1	1.2	11
University of Michigan, Homeopathic Coll.	21	21	0	0.	7
MINNESOTA					
University of Minnesota, Coll. of Med. and S.	50	46	4	8.0	9
MISSOURI					
St. Louis University, School of Medicine	106	103	3	2.8	13
Washington University, Medical Department	92	89	3	3.5	8
NEBRASKA					
John A. Creighton Medical College	50	49	1	2.0	8
Lincoln Medical College	15	14	1	6.7	4
University of Nebraska, College of Medicine	14	14	0	0.	1
NEW HAMPSHIRE					
Dartmouth Medical School	21	20	1	4.8	5
NEW YORK					
Albany Medical College	42	39	3	7.1	2
Columbia Univ., Coll. of Phys. and Surgs.	100	99	1	1.0	16
Cornell University Medical College	72	72	0	0.	9
Fordham University, School of Medicine	2	2	0	0.	1
Univ. and Bellevue Hosp. Medical College	77	75	2	2.6	8
University of Buffalo, Medical Department	40	37	3	7.5	3
OHIO					
Cleveland Coll. of Physicians and Surgeons	20	20	0	0.	2
Ohio-Miami Medical College	44	40	4	9.1	4
Pulte Medical College	5	5	0	0.	3
Starling-Ohio Medical College	45	44	1	2.2	3
Toledo Medical College	9	9	0	0.	1
Western Reserve University, Medical Dept	26	26	0	0.	6
OREGON					
Willamette University, Medical Department	11	10	1	9.1	3
PENNSYLVANIA					
Jefferson Medical College	149	145	4	2.7	31
Temple University, Medical Department	35	32	3	8.6	1
University of Pennsylvania, Dept. of Med.	164	160	4	2.4	25
Woman's Medical College of Pennsylvania	37	34	3	8.1	13
TENNESSEE					
Vanderbilt University, Medical Department	45	42	3	6.7	17
TEXAS					
Baylor University, College of Medicine	9	9	0	0.	2
Fort Worth University, Medical Department	21	21	0	0.	2
Southwestern University Medical College	16	16	0	0.	3
University of Texas, Dept. of Medicine	36	36	0	0.	3
VERMONT					
University of Vermont, College of Medicine	30	28	2	6.7	9
VIRGINIA					
Medical College of Virginia	39	39	0	0.	7
University of Virginia, Dept. of Medicine	31	31	0	0.	9
WISCONSIN					
Wisconsin Coll. of Physicians and Surgeons	7	7	0	0.	2
Totals	2567	2476	91	3.5	..

TOTAL REGISTRATION IN 1910

The tables thus far described have referred only to the results of examinations and to those registered on that basis. Table K, however, shows the total number who received licenses in each state, including those registered by examination, by reciprocity, and under various exemption clauses. Above 100 were registered in 28 different states, above 200 in 10, above 300 in 5 and above 400 in 3, the largest numbers being registered in Illinois with 675, in New York with 592, in Pennsylvania with 451, in Texas with 341 and in Tennessee with 330. Non-graduates were registered in 4 states, there being 142 registered in Tennessee, 39 in Mississippi, 6 in Massachusetts and 5 in Oregon. Altogether 7,352 physicians were licensed during 1910.

Table L gives those registered without examination on presentation of satisfactory credentials, which included a license issued by some other state. This is usually described by the term "reciprocity," which conveys the idea that the state which accepts the license of another must be granted the same courtesy by the state issuing the original license. The term does not well describe this method of registration, however, since some state boards consider it more fair to the physician to accept his credentials, if satisfactory, whether the state board issuing the original license returns the favor or not. Had not reciprocal relations been established by the 34 states shown in the table, 1,502 physicians, the majority of whom have been in practice for many years, would have been compelled to undergo the ordeal of a second trying examination.

TABLE I.—COLLEGES HAVING BETWEEN 10 AND 20 PER CENT. OF FAILURES BEFORE STATE BOARDS IN 1910.
BASED ON TABLE B.

College.	Total Examined.	Number Passed.	Number Failed.	Per Cent. Failed.	No of States.
CALIFORNIA					
College of Phys. and Surgs., Los Angeles	16	14	2	12.5	3
DISTRICT OF COLUMBIA					
George Washington Univ., Dept. of Medicine	33	29	4	12.1	14
Georgetown University, School of Medicine	25	22	3	12.0	10
GEORGIA					
Atlanta College of Physicians and Surgeons	78	70	8	10.7	5
Atlanta School of Medicine	59	49	10	17.0	9
ILLINOIS					
Chicago College of Medicine and Surgery	131	116	15	11.5	17
College of Physicians and Surgeons	154	132	22	14.3	20
Hahnemann Med. Coll. and Hosp., Chicago	49	42	7	14.3	16
MARYLAND					
College of Physicians and Surgeons	75	66	9	12.0	17
MINNESOTA					
Hamline University, Medical Department	17	14	3	17.7	8
MISSOURI					
Kansas City Hahnemann Medical College	28	23	5	17.9	7
University Medical College, Kansas City	56	49	7	12.5	8
NEW YORK					
Long Island College	76	65	11	14.5	4
New York Homeopath	25	21	4	16.0	3
Syracuse University, (	27	24	3	11.1	4
OHIO					
Cleveland Homeopathic Medical College	9	8	1	11.1	5
OREGON					
University of Oregon, Medical Department	21	17	4	19.0	3
PENNSYLVANIA					
Hahnemann Medical College and Hospital	56	48	8	14.3	13
Medico-Chirurgical College of Philadelphia	75	65	10	13.3	10
University of Pittsburgh, School of Medicine	75	66	9	12.0	3
TENNESSEE					
Tennessee Medical College	24	20	4	16.7	3
Univ. of Nashville and Tenn., Med. Dept.	90	75	15	16.7	16
Totals	1199	1035	164	13.7	..

RECIPROCITY AND EDUCATIONAL STANDARDS

As at present administered, reciprocal relations between some states are tending to lower rather than to elevate educational standards. A study of these statistics will show that in several instances such relations exist between states differing widely in their standards of education and in the methods and severity of their examinations. It can be seen, therefore, that a loosely administered provision for reciprocity provides a wide-open door through which unqualified candidates can obtain registration. There are some boards, however, which wisely reserve and exercise the right to reject any candidate who does not possess satisfactory credentials even though he is licensed in a state with which it has reciprocal relations. Some boards also wisely require that the applicant, before he is eligible to registration through reciprocity, must have been engaged *in the actual and* reputable practice of his profession for at least a year, in the state where the original license was granted. Without this provision a candidate may be tempted to obtain his original license in the state giving the easiest examination and, on the other hand, a state board may be tempted to make its examination less severe for the sake of obtaining additional fees. Hence, without the one-year-residence clause, standards of examination are apt to be lowered. In the establishing of reciprocal relations, *therefore, the state* board should reserve and exercise the discretionary power to refuse to register any candidate who could not originally have registered in that state and secondly, the board should require that the applicant shall have been in the actual practice of medicine for at least a year before he is eligible to registration under the reciprocity provision.

In the light of the above statement in regard to reciprocity, it will be interesting to study Table M which shows in what states the original licenses were granted of those who were registered elsewhere under the reciprocity provision during the last four years.

TABLE J.—Colleges Having Over 20 Per Cent. of Failures Before State Boards in 1910. Based on Table B.

College.	Total Examined.	Number Passed.	Number Failed.	Per Cent. Failed.	No of States.
ALABAMA					
Birmingham Medical College	35	25	10	28.6	4
University of Alabama, Medical Department	46	35	11	23.9	6
ARKANSAS					
College of Physicians and Surgeons	21	11	10	47.6	3
University of Arkansas, Medical Department	23	18	5	21.8	6
CALIFORNIA					
California Eclectic Medical College	3	2	1	33.3	1
Coll. of Phys. and Surgs., San Francisco	18	13	5	27.8	3
Hahnemann Medical College of the Pacific	5	4	1	20.0	1
DISTRICT OF COLUMBIA					
Howard University, Medical Department	39	25	14	35.9	19
GEORGIA					
Medical College of Georgia	25	20	5	20.0	6
ILLINOIS					
Bennett Medical College	45	32	13	28.9	11
College of Medicine and Surgery, Ph.M.	21	12	9	42.9	6
Hering Medical College	10	7	3	30.0	6
Jenner Medical College	20	16	4	20.0	2
National Medical University	6	1	5	83.3	1
Reliance Medical College	11	8	3	27.3	2
KENTUCKY					
Louisville National Medical College	6	1	5	83.3	5
University of Louisville, Medical Department	223	175	48	21.5	24
LOUISIANA					
Flint Medical College	6	4	2	33.3	3
MARYLAND					
Baltimore Medical College	95	76	19	20.0	22
Maryland Medical College	53	30	23	43.4	10
University of Maryland, School of Medicine	107	85	22	20.6	18
MASSACHUSETTS					
College of Physicians and Surgeons	36	11	25	69.4	5
MICHIGAN					
Detroit Homeopathic College	6	4	2	33.3	1
MISSISSIPPI					
Mississippi Medical College	23	11	12	52.2	2
MISSOURI					
American Medical College	6	4	2	33.3	2
Barnes Medical College	77	55	22	28.6	17
Ensworth Medical College	31	19	12	38.7	7
St. Louis College of Physicians and Surgs.	56	29	27	48.2	14
Eclectic Medical University, Kansas City	9	6	3	33.3	4
NEW YORK					
Eclectic Med. Coll. of the City of New York	12	8	4	33.3	2
N. Y. Med. Coll. and Hospital for Women	2	0	2	100.	1
NORTH CAROLINA					
Leonard School of Medicine	45	22	23	51.1	11
North Carolina Medical College	18	14	4	22.2	6
OHIO					
Eclectic Medical College	30	17	13	43.3	11
SOUTH CAROLINA					
Medical Coll. of the State of So. Carolina	58	42	16	27.6	6
TENNESSEE					
College of Phys. and Surgeons, Memphis	21	14	7	33.3	6
Knoxville Medical College	4	1	3	75.0	3
Memphis Hospital Medical College	118	82	36	30.5	10
Meharry Medical College	99	57	42	42.4	17
University of West Tennessee, Med. Dept.	9	4	5	55.6	5
VIRGINIA					
University College of Medicine	31	23	8	25.8	10
WISCONSIN					
Marquette University, Medical Department	56	43	13	23.2	5
Totals	1565	106[illegible]	409	31.9	..

In Conclusion

In the publication of these statistics, our endeavor has been to give an absolutely fair presentation of facts, a knowledge of which is always beneficial. Without question this annual presentation of the results of state licensing examinations has had a most helpful influence on medical education and medical licensure in this country. We reiterate our acknowledgments to the state licensing boards, whose ready cooperation and complete reports have made the publication of these data possible.

TABLE K.—Registrations by State Boards During 1910

States.	By Examination.			By Reciprocity.	Without Written Exam. or Under Exemption.	Total Registered.
	Graduates, 1906-1910.	Graduates, 1905 and Previous.	Non-graduates.			
Alabama	88	6	......	......	......	94
Arizona	10	5	......	......	......	15
Arkansas	85	11	......	36	......	132
California	125	79	......	......	......	204
Colorado	45	3	......	121	......	169
Connecticut	57	12	......	2	......	71
Delaware	19	2	......	......	......	21
District of Columbia	29	3	......	7	......	39
Florida	69	33	......	......	......	102
Georgia	145	3	......	29	1	178
Idaho	29	18	......	......	......	47
Illinois	604	27	......	44	......	675
Indiana	93	4	......	35	......	132
Iowa	111	2	......	48	......	161
Kansas	63	3	......	61	......	127
Kentucky	110	9	......	17	3	139
Louisiana	96	8	......	6	......	110
Maine	62	11	......	5	......	78
Maryland	126	5	......	12	......	143
Massachusetts	170	21	6	......	......	197
Michigan	123	8	......	40	......	171
Minnesota	62	14	......	50	......	126
Mississippi	39	6	39	......	......	84
Missouri	174	7	......	57	7	245
Montana	47	26	......	......	......	73
Nebraska	78	2	......	63	......	143
Nevada	3	9	......	11	......	23
New Hampshire	30	4	......	2	......	36
New Jersey	51	12	......	218	......	281
New Mexico	3	3	......	......	90	96
New York	468	47	......	42	35	592
North Carolina	76	3	......	17	......	96
North Dakota	31	11	......	28	......	70
Ohio	162	10	......	49	......	221
Oklahoma	67	33	......	148	......	248
Oregon	50	38	5	......	......	93
Pennsylvania	437	14	......	......	......	451
Rhode Island	18	5	......	......	......	23
South Carolina	58	3	......	1	.	62
South Dakota	36	16	......	......	......	52
Tennessee	159	14	142	15	......	330
Texas	130	32	......	179	......	341
Utah	33	1	......	14	......	48
Vermont	19	2	......	7	......	28
Virginia	108	14	......	16	......	138
Washington	79	75	......	......	......	154
West Virginia	84	4	......	24	......	112
Wisconsin	61	10	......	82	2	155
Wyoming	8	2	......	16	......	26
Totals	4830	690	192	1502	139	7352

This table shows the total number registered during 1910 in each state by the various methods. The first column shows the recent graduates registered, the second column, the *old practitioners* (graduates of 1905 and previous years), the third column the non-graduates, and the fourth column shows the number licensed through reciprocity. It is interesting to note that states which have registered large numbers through reciprocity have examined very few *old practitioners.* The chief exception is New York, which has arranged reciprocal relations with *only seven other* states. The fifth column shows those registered without written examination under various exemption clauses. The last column *shows the total number of* physicians registered in each state during the year.

TABLE L.—PHYSICIANS REGISTERED THROUGH RECIPROCITY BY STATE EXAMINING BOARDS DURING 1910.

State Board of	Total Reg. through Reciprocity, Ex. State.	Alabama	Arizona	Arkansas	California	Colorado	Connecticut	Delaware	Dist. of Columbia	Florida	Georgia	Idaho	Illinois	Indiana	Iowa	Kansas	Kentucky	Louisiana	Maine	Maryland	Massachusetts	Michigan	Minnesota	Mississippi	Missouri	Montana	Nebraska	Nevada	New Hampshire	New Jersey	New Mexico	New York	N. Carolina	N. Dakota	Ohio	Oklahoma	Oregon	Pennsylvania	Rhode Island	S. Carolina	S. Dakota	Tennessee	Texas	Utah	Vermont	Virginia	Washington	W. Virginia	Wisconsin	Wyoming	U. S. Pub. Health and Marine Hosp. Service.	Canada
Arkansas	36	..	..	..	..	..	..	..	..	..	..	..	4	2	..	1	5	7	..	..	..	..	..	..	8	..	..	..	..	..	..	..	..	..	..	5	..	..	..	..	..	..	3	..	1	..	..	..	..	..	..	..
Colorado	121	..	..	..	2	..	..	..	..	..	..	..	17	2	15	10	3	1	..	1	..	2	1	1	14	2	4	..	..	1	..	6	..	..	5	..	..	20	..	..	..	2	2	..	1	..	2	3	3	1	..	..
Connecticut	2	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Dist. of Col.	7	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	2	..	..	..	..
Georgia	29	..	..	..	..	..	..	..	..	1	..	..	..	1	1	..	1	..	1	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	8	..	..	..	..	..	10	..	..	..	3	..	..	1	..	..	..
Illinois	44	..	..	..	..	..	..	..	..	..	..	..	..	4	6	4	3	..	1	3	..	5	1	..	..	..	2	1	..	1	..	..	..	2	2	1	..	..	..	..	..	..	..	1	..	..	..	4	3	..	..	..
Indiana	35	..	..	..	..	1	..	..	..	..	..	..	11	..	2	2	8	..	..	..	..	4	1	..	1	..	..	..	..	..	..	..	..	..	4	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..
Iowa	48	..	..	..	..	1	..	..	..	..	..	..	27	1	..	4	..	..	..	..	..	..	3	..	3	..	7	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
Kansas	61	..	..	8	..	..	..	..	..	..	..	..	10	2	10	..	6	..	..	..	..	..	..	..	6	..	4	..	..	..	..	..	..	..	1	3	..	..	..	..	..	1	1	..	..	..	..	7	1	..	..	1
Kentucky	17	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	2	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	8	..	..	..	1	..	..	..	..	..	..
Louisiana	6	..	..	2	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..
Maine	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	..	..	..	..	..
Maryland	12	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	2	..	..	..	..	..	..	1	..	..	1	..	..	2	..	1	..	..	..	..
Michigan	40	..	..	..	..	1	..	..	..	..	1	..	12	2	2	..	1	..	..	2	..	..	..	..	1	..	1	..	..	1	..	2	1	..	6	1	..	..	..	..	..	..	..	..	..	1	..	2	3	..	..	..
Minnesota	50	..	..	..	..	..	..	1	..	..	..	..	25	..	7	1	..	..	2	1	..	2	..	..	1	..	1	..	..	1	..	..	..	2	1																	
Missouri	57	..	..	1	..	3	..	..	..	..	..	..	12	3	13	4	5	..	..	5	..	1	1	..	..	..	3	..	..	..	..	..	..	1																		
Nebraska	63	..	..	1	..	2	..	..	..	..	..	..	16	1	14	7	1	..	1	..	..	2	1	..	9	..	..	..	..	..	..	..	..	..																		
Nevada	11	..	..	..	..	..	..	..	..	..	..	..	3	1	..	..	..	..	..	1	..	1	1	..	..	..	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
New Hampshire	2	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
New Jersey	218	..	..	..	..	..	..	3	..	..	..	..	2	..	..	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	206	..	..	..	..	..	1	..	..	..	..	..	..	2	..	..	1	..	..	..	..
New York	42	..	..	..	..	..	..	..	..	..	..	..	..	1								11								9					3											..	..	..	2	..	..	1
No. Carolina	17	..	..	..	..	..	..	..	1	..	..	..	3	..																																6	..	..	..	..	2	..
No. Dakota	28	..	..	..	..	..	..	..	..	..	..	..	13																			..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	..
Ohio	49	..	..	..	..	..	..	..	1	..	..	..	10	9	..	1	..	..	3	3	..	10	..	..	..	..	..	..	..	1	..	4	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	5	..	..	..	..
Oklahoma	148	..	..	3	..	..	..	..	..	..	8	..	35	5	..	23	15	..	..	..	..	1	1	..	24	1	2	..	..	..	1	..	1	..	..	..	..	..	..	..	..	21	..	..	..	5	..	1	1	..	..	..
So. Carolina	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..
Tennessee	15	..	..	..	..	..	..	..	..	..	4	..	..	3	..	..	3	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	..
Texas	179	..	..	37	..	..	..	..	3	..	..	..	34	6	4	6	13	..	1	4	..	5	3	..	16	..	11	1	..	1	..	..	..	3	12	..	..	..	..	..	..	..	..	..	1	4	..	13	1	..	..	..
Utah	14	..	..	..	..	1	..	..	..	..	..	..	7	..	..	..	2	..	..	..	..	2	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Vermont	7	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	3	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Virginia	16	..	..	..	..	..	..	1	3	..	..	..	..	..	..	..	1	1	..	2	..	..	..	..	1	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	1	..	..	..	..	..	3	1	..	..	..
Wyoming	24	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..												2	..	..	..	..	..	..
W. Virginia	82	..	..	..	..	3	..	..	..	..	..	..	40	4	6	..	1	..	..	8	..	1	7	..	3	..	1	1	..	..	..	2	..	..												1	..	..	..	..	..	..
Wisconsin	16	..	..	..	..	..	..	..	1	..	..	..	3	1	4	..	..	..	..	..	..	..	1	..	2	..	..	..	..	..	..	..	..	..												..	..	1	..	..	..	..
*Total	1502	0	0	52	2	13	0	6	11	1	14	0	286	50	84	63	74	9	15	41	0	51	31	1	91	3	42	3	1	16	1	224	7	8	45	21	0	21	0	5	0	45	23	1	27	31	2	45	31	1	2	2

*Total received from each state through reciprocity.

This table shows the number of physicians registered by each state through reciprocity during 1910. "Reciprocity" is not the best term to use, however, since some states, Colorado for instance, register candidates who have satisfactory credentials including licenses, regardless as to whether the state issuing the original license reciprocates with those or not. Taking New York as an example, reading from left to right, the table shows that New York registered a total of 42 applicants through reciprocity during 1910, of which number 1 came from Indiana, 11 from Michigan, 9 from New Jersey, 3 from Ohio, 15 from Vermont, 2 from Wisconsin and 1 from Canada. Reading from above downward, the table shows that 224 physicians left New York during 1910 and registered in other states under the reciprocity provision, of which number 6 registered in Colorado, 1 in Connecticut, 1 in Georgia, 2 in Michigan, 206 in New Jersey, 4 in Ohio, 2 in Utah and 2 in Wisconsin. New Jersey leads, having registered 216 physicians through reciprocity, followed by Texas which registered 179, Oklahoma with 148, Colorado with 121 and Wisconsin with 82. It is interesting to note in what states the original licenses were issued. The table shows that of the 1,502 applicants registered through reciprocity, 286, or 19 per cent. obtained their original licenses in Illinois and 224, or 15 per cent. were first registered in New York, but 206 of the latter were registered in New Jersey. The states which furnished the three next highest numbers were Missouri with 91, Iowa with 84, and Kentucky with 74.

Altogether 1,502 licenses were issued through reciprocity in 1910, an increase of 335 over 1909, 410 over 1908, 513 over 1907 and 817 over 1905.

TABLE M.—RECIPROCAL REGISTRATIONS IN FOUR YEARS

Showing what states issued the original licenses

State	Physicians Going from States Named During				
	1907	1908	1909	1910	Totals
Alabama*	2	4	2	..	8
Arizona*	..	1	2	..	3
Arkansas	1	..	1	52	54
California*	2	2	1	2	7
Colorado	5	10	12	13	40
Connecticut*	..	2	2	..	4
Delaware	1	2	1	6	10
District of Columbia	15	14	13	11	53
Florida*	..	..	1	1	2
Georgia	10	18	10	14	52
Idaho*	..	1	1	..	2
Illinois	240	225	320	286	1,071
Indiana	30	33	46	50	159
Iowa	126	94	77	84	381
Kansas	33	32	41	63	169
Kentucky	21	53	30	74	178
Louisiana	3	..	2	9	14
Maine	16	24	18	15	73
Maryland	25	30	25	41	121
Massachusetts*	6	3	3	..	12
	62	63	51	51	227
	29	23	35	31	118
	1	1	1	1	4
Missouri	79	61	58	91	289
	..	..	..	3	3
	30	47	53	42	172
	2	4	2	3	11
New Hampshire	1	2	8	1	12
New Jersey	27	46	29	16	118
New Mexico*	..	1	7	1	9
New York	79	100	59	224	462
North Carolina	1	4	7	7	19
North Dakota	3	6	5	8	22
Ohio	39	35	47	45	166
Oklahoma	4	3	5	21	33
Oregon*	..	1	..	..	1
Pennsylvania*	15	15	7	21	58
Rhode Island*	..	1	1	..	2
South Carolina	2	4	7	5	18
South Dakota*	4	1	1	..	6
Tennessee	5	14	21	45	85
Texas	12	10	4	23	49
Utah	1	3	4	1	9
	12	20	24	27	83
	11	15	26	31	83
	..	..	..	2	2
	6	21	36	45	108
	27	42	46	31	146
	1	..	2	1	4
	..	..	3	..	3
	..	..	..	2	2
	..	..	..	2	2
	..	..	10	..	4
Totals	989	1,091	1,167	1,502	4,749

This table shows that 4,749 candidates were registered through reciprocity during the last four years and that there was a positive increase each year over the registration of the previous year. A study of the totals for the different states shows that of the 4,749 registered during the four years 1,071 or 22.6 per cent. obtained their original licenses in Illinois. This is more than twice the number coming from any other state. The states furnishing the next highest numbers are New York, with 462, Iowa with 381, and Missouri with 289. The states marked with an asterik (*) do not have reciprocal relations and would not appear in this table except for the fact that some states, like Colorado, and New Jersey, will accept a physician's credentials if satisfactory, whether the state issuing his original license returns the favor or not.

TABLE A.—PHYSICIANS EXAMINED

Marginal Number	NAME OF COLLEGE	1 Alabama		2 Arizona		3 Arkansas		4 California		5 Colorado		6 Connecticut		7 Delaware		8 District of Columbia		9 Florida		10 Georgia		11 Idaho		12 Illinois		13 Indiana		14 Iowa		15 Kansas		16 Kentucky		17 Louisiana		18 Maine		19 Maryland		20 Massachusetts		21 Michigan		Marginal Number
		P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	
	ALABAMA																																											
1	Birmingham Medical College.—R.	22	9																	2	0													1	0									1
2	University of Alabama, Med. Dept.—R.	23	10	1	0													6	0															3	1									2
	ARKANSAS																																											
3	College of Physicians and Surg.—R.					5	6																											1	1									3
4	Univ. of Arkansas, Med. Dept.—R.					15	3	1	0									1	0					0	1									0	1									4
	CALIFORNIA																																											
5	California Eclectic Med. College.—E.							3	2																																			5
6	College of P. and S., Los Angeles.—R.			2	0			11	2																																			6
7	Coll. of P. and S., San Francisco.—R.							12	6																																			7
8	Cooper Medical College.—R.							16	2																																			8
9	Hahnemann Medical College of Pacific.—H.							4	1																																			9
10	Oakland College of Med. and Surg.—R.							3	0																																			10
11	Univ. of California, Med. Dept.—R.							10	0																																			11
	COLORADO																																											
12	Univ. of Colorado, Med. Dept.—R.							1	0	12	0																																	12
	CONNECTICUT																																											
13	Yale Medical School.							1	0			12	0																															13
	DISTRICT OF COLUMBIA																																											
14	George Washington University.—R.							1	1							15	2			1	0	1	0	1	0													2	0					14
15	Georgetown Univ., School of Med.—R.			1	0							4	0			6	2							1	0															1	1			15
16	Howard University, Med. Dept.—R.											0	1	1	0	4	5	2	0	3	0			2	0					1	0	1	0					2	1	1	2			16
	GEORGIA																																											
17	Atlanta College of Physicians and Surg.—R.	1	5					1	0									11	3	53	0																							17
18	Atlanta School of Medicine.—R.	3	6															4	1	35	0																	1	0					18
19	Georgia College of Eclectic M. and S.—E.																	4	1																									19
20	Hospital Medical College, Atlanta.—E.																	7	0																									20
21	Medical College of Georgia.—R.	1	0															3	1	13	0																	0	1	0	2			21
	ILLINOIS																																											
22	Bennett Medical College.—R.									1	0											0	1	23	8	1	0			0	1													22
23	Chicago Coll. of Med. and Surg.—R.							0	1													1	1	91	9	6	0	1	0			1	0											23
24	College of Med. and Surg.—Ph.M.																							8	8	1	0	1	0			1	0											24
25	College of Physicians and Surg.—R.	1	1	0	1			10	0			0	1									2	2	94	13	1	0	1	0			1	1					1	0					25
26	Hahnemann Medical College and Hosp.—H.			2	0			1	1			2	0									1	0	25	4	1	1	3	0											1	0			26
27	Hering Medical College.—H.									1	0													3	2	1	0	1	0															27
28	Jenner Medical College.—R.																							15	4	1	0																	28
29	National Medical University.—P.																							1	5																			29
30	Northwestern Univ. Med. School.—R.			1	0			5	0									3	0			8	2	121	1	2	0	1	0	2	0			1	0					1	0			30
31	Reliance Medical College.—R.																							7	3																			31
	Rush Medical College.—R.					1	0	6	3	3	0							2	0			1	1	63	0			1	0															32
	INDIANA																																											
	Indiana Univ., School of Med.—R.																							1	0	53	1													0	1			33
	IOWA																																											
34	Drake University, College of Medicine.—R.							0	1													0	1					23	0															34
35	State University of Iowa, College of Med.—R.							5	0							1	0					0	2					50	1															35
36	State University of Iowa, Homeo. Dept.—H.									1	0							1	0			1	0					9	0															36
	KANSAS																																											
37	Kansas Medical College.—R.																													12	1													37
38	Univ. of Kansas, School of Med.—R.																													18	0													38
	KENTUCKY																																											
39	Louisville National Medical College.—R.																	1	0													0	1					0	1					39
40	Univ. of Louisville, Med. Dept.—R.	5	1	1	2	0	1	1	1	1	1											1	0	13	0	9	0			1	1	92	18	3	2					1	0			40
	LOUISIANA																																											
41	Flint Medical College.—R.																			1	0													1	2									41
42	Tulane University, Med. Dept.—R.	3	1	1	0	11	0	2	1									6	0	3	0			1	0									65	2					1	0			42
	MAINE																																											
43	Medical School of Maine.—R.							1	0			1	0					1	0																	20	0			4	1			43
	MARYLAND																																											
44	Baltimore Medical College.—R.			1	0			1	0			7	5									1	0	1	0	1	0							1	1	3	0	21	4	5	2			44
45	College of Physicians and Surg.—R.							0	1			2	2	2	0																							12	1	3	0			45
46	Johns Hopkins Univ., Med. Dept.—R.	3	0					5	0			4	0													1	0			1	0	1	0					22	0	3	0			46
47	Maryland Medical College.—R.	1	0									0	2																					0	1	2	0	5	9	2	4			47
48	Univ. of Maryland, School of Med.—R.							2	1			0	2	1	1			3	0	1	0	1	0	1	0													36	11	6	1			48
	MASSACHUSETTS																																											
49	Boston University School of Medicine.—H.											4	1											1	0											4	0			13	0			49
50	College of Physicians and Surgeons.—R.											1	1																							4	2			6	18			50
51	Harvard Medical School.—R.					1	0	3	0	2	0	3	0					2	0					1	0	1	0									9	0	1	0	42	2	2	0	51
52	Tufts College Medical School.—R.							1	0			1	0																							10	1			62	7	1	0	52
	MICHIGAN																																											
53	Detroit College of Medicine.—R.							2	0															2	0																	34	1	53
54	Detroit Homeopathic College.—R.																																									4	2	54
55	Univ. of Mich., Dept. of M. and S.—R.					1	0	6	0									1	0			3	0			2	0											1	0			61	0	55
56	University of Mich., Homeo. College.—H.																							1	0	1	0					1	0							1	0	13	0	56
	MINNESOTA																																											
57	Univ. of Minn., College of M. and S.—R.							2	0													1	0																					57
58	Hamline University, Med. Dept.—R.							1	1													1	0																					58
	MISSISSIPPI																																											
59	Mississippi Medical College.—R.																																											59
	MISSOURI																																											
60	American Medical College.							0	1																																			60
61	Barnes Medical College.—R.	0	1			1	1			0	1							3	0			3	0	20	11			2	0	3	0													61
62	Eclectic Medical University, Kansas City.					4	0															0	1							1	3													62
63	Ensworth Medical College.—R.					0	1			0	1											1	1					2	1	1	6			0	1									63
64	Kansas City Hahnemann Med. College.—H.					10	0																							3	2													64
65	St. Louis University, School of Medicine.—R.			1	0			2	0													2	1	45	1	1	0			2	2	1	0											65
66	St. Louis College of Phys. and Surgs.—R.					2	5			0	1											1	0	8	10	0	1	1	0	1	1	1	0											66
67	University Medical College, Kansas City.—R.			1	0	6	0	1	1																			5	1	13	3													67
68	Washington University, Med. Dept.—R.					1	0																	36	1					1	0													68
		1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		

R—Regular; H—Homeopathic; E—Eclectic; Ph.M—Physiomedical; P—Panpathic.

Marginal Number	22 Minnesota		23 Mississippi		24 Missouri		25 Montana		26 Nebraska		27 Nevada		28 New Hampshire		29 New Jersey		30 New Mexico		31 New York		32 North Carolina		33 North Dakota		34 Ohio		35 Oklahoma		36 Oregon		37 Pennsylvania		38 Rhode Island		39 South Carolina		40 South Dakota		41 Tennessee		42 Texas		43 Utah		44 Vermont		45 Virginia		46 Washington		47 West Virginia		48 Wisconsin		49 Wyoming		Totals:	Examined—Passed	Examined—Failed	Percentage of Failures	No. States Ex. in	Marginal Number
	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F						
1																											1	0																													35	25	10	28.6	4	1
2			1	0																							0	1													2	0															48	36	12	25.0	7	2
3																											5	3																													21	11	10	47.6	3	3
4																											1	0																													23	18	5	21.8	6	4
5																																																									5	3	2	40.0	1	5
6																																															1	0									16	14	2	12.5	3	6
7	0	1													1	0													1	0																			1	0							22	15	7	31.8	5	7
8											3	0																	2	0																			1	0							24	22	2	8.3	4	8
9									1	0																																															6	5	1	16.7	2	9
10																																																									3	3	0	0.	1	10
11																			0	1																																					11	10	1	9.1	2	11
12																											1	0			1	0																									15	15	0	0.	4	12
13					1	0													7	1									1	0			3	0							1	0							1	0							28	27	1	3.6	8	13
14															1	0			3	0			1	[illegible]					3	0					0	1	1	0									2	0	1	0	1	0					38	34	4	10.5	15	14
15																			4	0											3	0	0	1			1	0			1	0					1	0			1	0					28	24	4	14.3	12	15
16			1	1	1	0															2	0			1	0	1	0			2	2			0	2											2	0	1	0	2	0					44	30	14	31.8	20	16
17																																			4	1					2	0															81	72	9	11.1	6	17
18			0	1																	1	0									1	1			3	1																			1	0	59	49	10	17.0	8	18
19																															1	0																									6	5	1	16.7	2	19
20																																																									7	7	0	0.	1	20
21																																			4	3													1	0							29	22	7	24.1	7	21
22							1	0	1	0													0	1			0	1			3	0					2	1											0	2							47	32	15	31.9	12	22
23	1	1			1	0	1	2													1	0	3	0			1	1	1	0	4	1					1	0					1	0					1	0			1	0			133	117	16	12.0	18	23
24																							0	1																	1	0															21	12	9	42.9	6	24
25	2	0			1	0	8	1	2	0	1	0											1	0					1	4							10	0			2	0	1	0			1	0	11	1	1	1	6	0			185	159	26	14.1	24	25
26							3	0											0	1							1	0	2	1	0	1					0	1			1	0	1	0			1	0	1	0			1	0			57	47	10	17.5	19	26
27									1	0																			0	1																											10	7	3	30.0	6	27
28																																																									20	16	4	20.0	2	28
29																																																									6	1	5	83.3	1	29
30																																																									206	195	11	5.3	20	30
31																															1	0																									11	8	3	27.3	2	31
32	4	0			1	0	6	1			1	0											2	0	1	0	1	0	8	1							5	0	1	0	1	0	4	0					7	4					1	0	130	120	10	7.7	21	32
33							1	0															0	1	1	0					1	0																									60	57	3	5.0	7	33
34					1	0																															0	1																			27	24	3	11.1	5	34
35							0	1																			2	0	3	0							3	1											7	1							78	72	6	7.7	10	35
36																													2	0																			1	0							15	15	0	0.	6	36
37					2	0																																											1	1							17	15	2	11.8	3	37
38					3	0	1	1																																																	23	22	1	4.4	3	38
39			0	2																							0	1																													6	1	5	16.7	5	39
40			1	1	7	2	2	1					1	0													5	2	0	4	2	1			1	3			10	1	4	1	1	0			6	0	0	1	14	9			1	0	236	183	53	22.5	27	40
41																											2	0																													6	4	2	33.3	3	41
42			4	2															1	0	1	0					4	0							2	0			2	0	7	0															120	114	6	5.0	16	42
43													1	0															1	0																	1	0			0	1							32	30	2	6.7	9	43
44			0	1			1	0					2	1	1	1			12	1	1	0							1	3	9	4	0	2	2	0			1	0					2	0	4	0	1	1	3	0					108	82	26	24.1	25	44
45			1	0			1	0							2	0			3	2	1	1	1	0			1	0			12	1	5	0	0	1					1	0	1	0			3	0	1	1	20	3					85	72	13	15.3	20	45
46	1	0			2	0	1	0			1	0			3	0			16	0	1	0			1	0	0	1	2	0	7	0	1	0	1	0											3	0	2	0	1	0					84	83	1	1.2	24	46
47																			2	0							1	0			10	5			0	2					0	1					6	2			3	1					59	32	27	45.8	13	47
48	1	0													1	1			1	0	12	0							1	0	12	4	0	1	1	2			1	0	1	0					5	0			5	0					116	92	24	20.7	21	48
49													2	0					3	2													1	1															1	0							33	29	4	12.1	8	49
50													0	3																																	0	1									36	11	25	69.5	5	50
51					1	0							4	0	1	0			6	3	1	0	1	0	1	0	2	0					3	0	1	0					1	0	1	0	1	0			3	0							99	94	5	5.1	25	51
52													8	1					4	0													2	0					1	0									2	1							102	92	10	9.8	10	52
53							1	0																					2	0	1	0																	1	0			1	0			45	44	1	2.2	8	53
54																																																									6	4	2	33.3	1	54
55	1	0					3	0							0	1			0	1			2	0					2	1									2	0			1	0					9	3							101	95	6	5.9	16	55
56																			3	0											1	0																									21	21	0	0.	7	56
57	32	4					5	1															5	0					2	0							5	0											7	0			1	0			65	60	5	7.7	9	57
58	4	1					1	1															5	0					1	0							1	0											1	0			1	0			19	16	3	15.8	9	58
59			8	11																																			3	1																	23	11	12	52.2	2	59
60					3	2																					1	1													1	0															8	4	4	50.0	4	60
61	0	1			15	5	1	1	1	0																	5	3	1	2							[illegible]	0			3	0							1	1	1	0					90	62	28	31.1	18	61
62																																																									10	6	4	40.0	4	62
63					7	[illegible]																																											1	0							35	20	15	42.9	10	63
64					4	[illegible]																					[illegible]	[illegible]									0	1			1	1							1	1							29	23	6	20.7	8	64
65	1	0			42	[illegible]	1	0																			3	0	1	0													2	0					0	1							109	104	5	4.6	14	65
66			0	1	12	5																	1	0			2	1	3	1	1	0									3	1	1	1					1	0	1	0					67	39	28	41.8	18	66
67					16	3	1	1	1	0																	7	0	1	1	1	1									1	0							0	1					1	0	67	55	12	17.9	14	67
68					48	0			1	0																	2	1	1	1																			2	0							95	92	3	3.2	8	68
	22		23		24		25		26		27		28		29		30		31		32		33		34		35		36		37		38		39		40		41		42		43		44		45		46		47		48		49							

Marginal Number	NAME OF COLLEGE	1 Alabama		2 Arizona		3 Arkansas		4 California		5 Colorado		6 Connecticut		7 Delaware		8 District of Columbia		9 Florida		10 Georgia		11 Idaho		12 Illinois		13 Indiana		14 Iowa		15 Kansas		16 Kentucky		17 Louisiana		18 Maine		19 Maryland		20 Massachusetts		21 Michigan		Marginal Number
		P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	
	NEBRASKA																																											
69	John A. Creighton Medical College.—R.							2	0									0	1																									69
70	Lincoln Medical College.—E.																					0	1							1	0													70
71	University of Nebraska, College of Med.—R.																	1	0			1	1																					71
	NEW HAMPSHIRE																																											
72	Dartmouth Medical School.—R.											2	0																							1	0			9	1			72
	NEW YORK																																											
73	Albany Medical College.—R.																	2	0	1	0																							73
74	Columbia University, Coll. of P. and S.—R.	1	0					7	0			2	0					1	0	1	0			1	0					8	0					3	0	1	0	3	0			74
75	Cornell University Medical College.—R.	1	0									1	0											1	0			1	0					1	0	1	0			1	0			75
76	Eclectic Med. Coll., of City of New York.—E.																																											76
77	Fordham University, School of Medicine.—R.																																											77
78	Long Island College Hospital.—R.							1	0			2	0																															78
79	New York Homeo. Med. Coll. and Hosp.—H.							1	0			1	0																															79
80	N. Y. Med. Coll. and Hosp. for Women.—H.							1	0																																			80
81	Syracuse University, College of Medicine.—R.							1	2																																			81
82	Univ. and Bellevue Hosp. and Med. Coll.—R.	1	0					2	0			2	0			1	0							1	0	1	0			0	1													82
83	University of Buffalo, Medical Dept.—R.							1	0													1	0	1	0							1	0									1	0	83
	NORTH CAROLINA																																											
84	Leonard School of Medicine.—R.	2	7													1	0	1	0	5	2																	0	1	0	1			84
85	North Carolina Medical College.																	1	0																									85
	OHIO																																											
86	Cleveland College of P. and S.—R.							1	1																																			86
87	Cleveland Homeo. Medical College.—H.					1	0	1	2																																			87
88	Eclectic Medical College.—E.					0	1	0	1	0	1											1	0	2	1	1	1			0	1	2	1							0	1			88
89	Ohio-Miami Medical College.—R.									1	0																					3	0											89
90	Pulte Medical College.—H.							1	1																	1	0																	90
91	Starling-Ohio Medical College.—R.							1	0													1	0																					91
92	Toledo Medical College.—R.																																											92
93	Western Reserve University, Medical Dept.—R.							1	1																			1	0															93
	OREGON																																											
94	Willamette University, Medical Dept.—R.																					1	0																					94
95	University of Oregon, Medical Dept.—R.							1	0																																			95
	PENNSYLVANIA																																											
96	Hahnemann Med. College and Hospital.—H.							3	1			4	0											1	0	1	0					1	0			2	1			1	0			96
97	Jefferson Medical College.—R.	2	0			3	0	4	1	1	0	4	0	4	0	0	1	2	0			2	0	5	0			5	0									3	0	2	0	1	0	97
98	Medico-Chirurgical College of Philadelphia.—R.			1	0									2	0			1	0			2	0			0	1											1	0					98
99	Temple University, Medical Department.—R.																																											99
100	Univ. of Pennsylvania, Dept. of Med.—R.	2	0	1	0			1	0			1	0	3	0			5	0			1	0	2	0	3	0	2	0							5	0	14	0	5	0			100
101	Univ. of Pittsburgh, School of Medicine.—R.																																											101
102	Womans Med. Coll. of Pennsylvania.—R.									1	0			1	0	0	1									1	0													1	0			102
	SOUTH CAROLINA																																											
103	Med. Coll. of the State of So. Carolina.—R.			0	2			2	0									5	2	2	0																							103
	TENNESSEE																																											
104	College of Physicians and Surgs., Memphis.—R.					2	2																											1	0									104
105	Knoxville Medical College.—R.	0	1																	0	1																							105
106	Memphis Hospital Medical College.—R.	2	4	1	0	18	3											2	0			0	2											13	12									106
107	Meharry Medical College.—R.	0	6			4	3											3	1	15	4			2	4							2	4	1	3									107
108	Tennessee Medical College.—R.																																											108
109	Univs. of Nashville and Tenn., Med. Dept.—R.	10	5	0	1	5	0	0	1									3	1	3	0	1	2	1	0							2	0	7	0									109
110	University of West Tennessee, Med. Dept.—R.																																											110
111	Vanderbilt University, Med. Dept.—R.	4	0			1	1	4	0	2	0							3	0	1	0			3	0							2	0	2	0									111
	TEXAS																																											
112	Baylor University, College of Medicine.—R.					1	0																											0	1									112
113	Fort Worth University, Medical Dept.—R.																																											113
114	Southwestern University Medical College.—R.					4	0																																					114
115	University of Texas, Dept. of Medicine.—R.																																											115
	VERMONT																																											
116	University of Vermont, College of Med.—R.							1	0			3	1					1	0																	1	0			3	0			116
	VIRGINIA																																											
117	Medical College of Virginia.—R.																	1	0	1	0			1	0																			117
118	University of Virginia, Dept. of Med.—R.	2	0									1	0	1	0	2	1																					2	0					118
119	University College of Medicine.—R.											1	0					1	0																			0	1	0	2			119
	WISCONSIN																																											
120	Marquette University, Medical Dept.—R.																			1	0																							120
121	Wisconsin Coll. of Phys. and Surgs.—R.																																											121
	CANADIAN																																											
122	Laval University, Medical Dept.							2	0																											4	1			0	3			122
123	Manitoba Medical College.																																											123
124	McGill University, Medical Faculty.							2	0													1	0	2	0											2	0			4	0			124
125	Queens University, Medical Faculty.					1	0					1	0													1	0	1	0									1	0					125
126	University of Toronto, Faculty of Med.							1	1													1	0													1	0							126
127	Western University, Medical Dept.							1	0																																			127
128	Foreign Colleges	2	0					6	1					1	1	1	1	2	1					6	2	0	1											1	0	6	4	1	0	128
129	Miscellaneous Medical Colleges	2	7	0	3	3	1	34	7	22	0	3	2	5	0	1	0	6	3	6	2	4	5	16	12	5	3	2	1	2	3	6	10	3	6	1	0	4	2	3	6	13	0	129
130	Undergraduates																																							6	41			130
	Totals by States	158		24		124		251		53		87		23		45		117		157		71		731		106		117		91		154		138		78		163		297		134		
	Totals—Examined—Passed	94		15		96		204		48		69		21		32		102		148		47		631		97		113		66		119		104		73		131		197		131		
	Totals—Examined—Failed	64		9		28		47		5		18		2		13		15		9		24		100		9		4		25		35		34		5		32		100		3		
	Percentage of Failures	40.5		37.5		22.6		18.7		9.4		20.7		8.7		28.9		12.8		5.7		33.8		13.7		8.5		3.4		27.5		22.7		24.6		6.4		19.6		33.6		2.2		
		1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		

R—Regular; H—Homeopathic; E—Eclectic; Ph.M—Physiomedical; P—Panpathic.

Marginal Number	22 Minnesota		23 Mississippi		24 Missouri		25 Montana		26 Nebraska		27 Nevada		28 New Hampshire		29 New Jersey		30 New Mexico		31 New York		32 North Carolina		33 North Dakota		34 Ohio		35 Oklahoma		36 Oregon		37 Pennsylvania		38 Rhode Island		39 South Carolina		40 South Dakota		41 Tennessee		42 Texas		43 Utah		44 Vermont		45 Virginia		46 Washington		47 West Virginia		48 Wisconsin		49 Wyoming		Totals:	Examined—Passed	Examined—Failed	Percentage of Failures	No. States Ex. In	Marginal Number
	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F						
69							3	0	30	0																			3	0							2	0											1	0					2	0	53	52	1	1.9	8	69
70									11	0																																													2	0	15	14	1	6.7	4	70
71									14	0																			0	1																											18	16	2	11.1	4	71
72													7	1																			1	0																							22	20	2	9.1	5	72
73			1	0			1	0											38	3											1	0	1	0															2	0							50	47	3	6.0	8	73
74	2	0			2	0	2	0							5	0			67	1							1	0	2	0	5	0	2	0															4	0							116	115	1	0.9	20	74
75	1	0					1	0					1	0	1	0			64	0																															1	0					76	76	0	0.	13	75
76															2	0			6	4																																					12	8	4	33.3	2	76
77																			2	0																																					2	2	0	0.	1	77
78	1	0													2	2			60	9															1	0							1	0					1	0							80	69	11	13.7	8	78
79															3	0			18	5																																					28	23	5	17.9	4	79
80																			0	2																																					3	1	2	66.7	2	80
81	1	0																	21	3											1	0					1	0																			30	25	5	16.7	5	81
82							1	0							3	0			65	2							1	0	0	1							0	1			1	0															84	79	5	6.0	14	82
83																			35	4							0	1																			1	1			1	0					48	42	6	12.5	9	83
84																					5	3					1	1			0	1			0	5			1	0							7	4									48	23	25	52.1	12	84
85																	1	0			10	2													0	2					1	0									1	0					18	14	4	22.2	6	85
86																									20	0					1	0																									23	22	1	4.4	3	86
87							1	0											1	0					4	1	3	2			1	0											1	0													18	13	5	27.8	8	87
88																									7	2	1	0	0	1	2	0					2	0													2	4					35	20	15	42.9	15	88
89							1	0																	35	4																															44	40	4	9.1	4	89
90																									3	[illegible]					1	0																									7	6	1	14.3	4	90
91					1	0																			43	1					1	0																									48	47	1	2.1	5	91
92																									9	0																															9	9	0	0.	1	92
93																									21	0			1	0													1	0					2	0							28	27	1	3.6	6	93
94																													7	2																			2	0							12	10	2	16.7	3	94
95																													11	4																			5	0							21	17	4	19.0	3	95
96	3	1													3	1			2	0					2	0	1	0			28	4															1	1					1	0			63	54	9	14.3	15	96
97	3	2	1	0			2	0			1	0			12	1			6	0	11	[illegible]	1	0	3	0	2	1	3	1	61	0	2	0	1	0					2	0	6	0					5	1	5	0	1	0			174	166	8	4.6	33	97
98															2	2			2	0	1	0			1	0	1	0	1	0	57	8									1	0	1	1					1	0							87	75	12	13.8	16	98
99																															32	3																									35	32	3	8.6	1	99
100	3	0	1	0											14	0			11	1	5	0			3	0	1	0	0	1	90	2							1	0	2	0	2	0			6	0	4	1	2	0	1	0			196	191	5	2.6	29	100
101																													2	2	59	6																			5	1					75	66	9	12.0	3	101
102					1	0	1	0							3	0			6	2									1	0	16	0									3	0	1	0							2	0					41	38	3	7.3	14	102
103																																			34	13											1	0									61	44	17	27.9	6	103
104			3	3																							1	0											6	2	1	0					1	0									135	93	42	31.1	13	104
105			0	1																	0	1																	1	0																	5	1	4	80.0	5	105
106		17	10				1	1									1	0											0	1									35	2	14	0					1	0									135	93	42	31.1	13	106
107			1	2	2	1															1	0			1	0	3	3			0	2			0	2			18	7	5	0									1	2					103	59	44	42.7	17	107
108																					1	2							0	2									21	1									0	2							29	22	7	24.1	4	108
109			6	6	1	0	0	1									1	1	1	0							3	1			2	0			1	0			30	5	7	0							0	1							109	84	25	22.9	21	109
110																					1	0					1	2							0	1			2	1							0	1									9	4	5	55.6	5	110
111			3	0	1	1	1	0													1	0					2	1							1	2			11	0	6	0					1	0	1	0							55	50	5	9.1	19	111
112																																									9	0															11	10	1	9.1	3	112
113																											2	0													19	0															21	21	0	0.	2	113
114																											1	0													11	0															16	16	0	0.	3	114
115					1	0													2	0																					34	0															37	37	0	0.	3	115
116													4	0																	1	0	2	1											15	1			1	0							35	32	3	8.6	10	116
117			1	0															1	0	2	0									1	0			1	0											29	0			5	0					43	43	0	0.	10	117
118			1	0																							1	0											3	0							21	0			2	0					37	36	1	2.7	10	118
119															2	1			0	1	5	1					1	0					0	1													13	1			1	0					32	24	8	25.0	11	119
120	1	4					1	0															3	0																									0	2			42	7			61	48	13	21.3	6	120
121																							1	0																													6	0			7	7	0	0.	2	121
122	0	2											3	2									1	0					0	1			0	2											1	0											22	11	11	50.0	9	122
123	1	0																																															2	0							3	3	0	0.	2	123
124	3																										1																						1	0			1	0			28	28	0	0.	16	124
125															0	1			8	0			1	1	1	0																															20	18	2	10.0	12	125
126	3	0					3	0											4	1			5	0	1	0			1	0	2	1																	5	1							31	27	4	12.9	11	126
127																							1	0	2	0			2	1																			1	0							8	7	1	12.5	5	127
128	3	0					2	0			3	0			1	5			20	21	1	0			5	0			1	1	2	0									1	0	1	0	1	0			1	0			2	0			108	70	38	35.2	24	128
129	[illegible]	1	1	6	2	1	5	6			1	1			0	1	3	0	6	1	14	5	1	1	6	2	23	12	8	15	11	4	0	1	3	3	8	3	23	7	11	2	1	2			7	3	28	13	7	4			1	0	478	311	167	34.9	45	129
130			39	95																									5	0									142	25																	253	192	161	45.6	4	130
	98		234		204		97		80		13		42		80		7		587		94		47		182		142		148		503		33		105		61		367		167		38		22		136		197		113		78		10		7004					
	76		84		181		73		80		12		34		63		6		515		79		42		172		100		93		451		23		61		52		315		162		34		21		122		154		88		71		10			5712				
	22		150		23		24		0		1		8		17		1		72		15		5		10		42		55		52		10		44		9		52		5		4		1		14		43		25		7		0				1292			
	22.4		64.1		11.3		24.7		0.		7.7		19.0		21.2		14.3		12.3		16.0		10.6		5.5		29.6		37.2		10.3		30.3		41.9		14.8		14.2		3.0		10.5		4.5		10.3		21.8		22.1		9.0		0					18.4		
	22		23		24		25		26		27		28		29		30		31		32		33		34		35		36		37		38		39		40		41		42		43		44		45		46		47		48		49							

TABLE B.—GRADUATES OF 1906 TO 1910 INCLUSIVE,

Marginal Number	NAME OF COLLEGE	1 Alabama		2 Arizona		3 Arkansas		4 California		5 Colorado		6 Connecticut		7 Delaware		8 District of Columbia		9 Florida		10 Georgia		11 Idaho		12 Illinois		13 Indiana		14 Iowa		15 Kansas		16 Kentucky		17 Louisiana		18 Maine		19 Maryland		20 Massachusetts		21 Michigan		Marginal Number
		P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	
	ALABAMA																																											
1	Birmingham Medical College.—R.	22	[illegible]																	2	0													1	0									1
2	University of Alabama, Med. Dept.—R.	23	10	1	0													6	0															3	1									2
	ARKANSAS																																											
3	College of Physicians and Surgs.—R.					5	6																											1	1									3
4	Univ. of Arkansas, Med. Dept.—R.					15	3	1	0									1	0					0	1									0	1									4
	CALIFORNIA																																											
5	California Eclectic Med. College.—E.							2	1																																			5
6	College of P. and S., Los Angeles.—R.			2	0			11	2																																			6
7	Coll. of P. and S., San Francisco							11	5																																			7
8	Cooper Medical College.—R.							16	2																																			8
9	Hahnemann Medical College of Pacific.—H.							4	1																																			9
10	Oakland College of Med. and Surg.—R.							3	0																																			10
11	Univ. of California, Med. Dept.—R.							10	0																																			11
	COLORADO																																											
12	Univ. of Colorado, Med. Dept.—R.									12	0																																	12
	CONNECTICUT																																											
13	Yale Medical School											12	0																															13
	DISTRICT OF COLUMBIA																																											
14	George Washington University.—R.							1	1							15	2			1	0	1	0	1	0													2	0					14
15	Georgetown Univ., School of Med.—R.			1	0							4	0			6	2							1	0															1	1			15
16	Howard University, Med. Dept.—R.											0	1	1	0	4	5	2	0	3	0			2	0					1	0							2	1	0	2			16
	GEORGIA																																											
17	Atlanta College of Physicians and Surgs.—R.	1	5															11	2	53	0																							17
18	Atlanta School of Medicine.—R.	3	6															4	1	35	0																	1	0					18
19	Georgia College of Eclectic M. and S.—E.																	4	0																									19
20	Hospital Medical College, Atlanta.—E.																	7	0																									20
21	Medical College of Georgia.—R.	1	0															1	1	13	0																	0	1					21
	ILLINOIS																																											
22	Bennett Medical College.—R.									1	0											0	1	23	8	1	[illegible]			0	1													22
23	Chicago Coll. of Med. and Surg.—R.							0	1													1	1	91	0	6	0	1	0			1	0											23
24	College of Med. and Surg.—Ph.M.																							8	8	1	0	1	0			1	0											24
25	College of Physicians and Surgs.—R.							4	0													1	2	94	13	1	0	1	0			0	1					1	0					25
26	Hahnemann Medical College and Hosp.—H.			2	[illegible]			1	0			2	0									1	0	25	4	1	1	2	0											1	0			26
27	Hering Medical College.—H.									1	0													3	2	1	0	1	0															27
28	Jenner Medical College.—R.																							15	4	1	0																	28
29	National Medical University.—P.																							1	5																			29
30	Northwestern Univ. Med. School.—R.			1	0			4	0													5	2	119	1	2	0	1	0	2	0									1	0			30
31	Reliance Medical College.—R.																							7	3																			31
32	Rush Medical College.—R.							3	0	2	0											1	0	59	0			1	0															32
	INDIANA																																											
33	Indiana Univ., School of Med.—R.																							1	0	53	1													0	1			33
	IOWA																																											
34	Drake Univ., College of Medicine.—R.																					0	1					23	0															34
35	State Univ. of Iowa, Coll. of Med.—R.							3	0							1	0					0	1					50	1															35
36	State Univ. of Iowa, Homeo. Dept.—H.									1	0											1	0					9	0															36
	KANSAS																																											
37	Kansas Medical College.—R.																													12	0													37
38	Univ. of Kansas, School of Med.—R.																													18	0													38
	KENTUCKY																																											
39	Louisville, National Medical College.—R.																	1	0													0	1					0	1					39
40	Univ. of Louisville, Med. Dept.—R.	5	1	1	2	0	1			1	0											1	0	12	0	0	0			1	1	90	18	3	2									40
	LOUISIANA																																											
41	Flint Medical College.—R.																			1	0													1	2									41
42	Tulane University, Med. Dept.R.	3	1			10	0	1	1									6	0	3	0													62	2					1	0			42
	MAINE																																											
43	Medical School of Maine.—R.																																			20	0			1	1			43
	MARYLAND																																											
44	Baltimore Medical College.—R.			1	0			1	0			7	5									1	0	1	0	1	0							1	1	2	0	21	2	5	2			44
45	College of Physicians and Surgs.—R.											2	1	2	0																							11	1	3	[illegible]			45
46	Johns Hopkins Univ., Med. Dept.—R.	3	0					5	0			3	0													1	0			1	0							20	0	3	0			46
47	Maryland Medical College.—R.	1	0									0	2																					0	1	2	0	5	8	1	4			47
48	Univ. of Maryland, School of Med.—R.											0	2	1	1			3	0	1	0			1	0													36	10	4	1			48
	MASSACHUSETTS																																											
49	Boston Univ. School of Medicine.—H.											2	0											1	0											3	0			13	0			49
50	College of Physicians and Surgeons.—R.											1	1																							4	2			6	18			50
51	Harvard Medical School.—R.					1	[illegible]	3	0	2	0	2	0					1	0					1	0	1	0									7	0	1	0	42	2	1	[illegible]	51
52	Tufts College Medical School.—R.											1	0																							10	1			62	7	1	[illegible]	52
	MICHIGAN																																											
53	Detroit College of Medicine.—R.																																									33	1	53
54	Detroit Homeopathic College.—H.																																									4	[illegible]	54
55	Univ. of Mich., Dept. of M. and S.—R.							1	0									1	0							2	0															60	0	55
56	University of Mich., Homeo. College.—H.																							1	0	1	0					1	0							1	0	13	0	56
	MINNESOTA																																											
57	Univ. of Minn., Coll. of M. and S.—R.							1	0													1	0																					57
58	Hamline University, Med. Dept.—R.							1	1													1	0																					58
	MISSISSIPPI																																											
59	Mississippi Medical College.—R.																																											59
	MISSOURI																																											
60	American Medical College.—	0	1			1	1			0	1							1	0			3	0	20	9			2	0	2	0													60
61	Barnes Medical College.—					4	0															0	1							1	2													61
62	Eclectic Medical University, Kansas City					0	1			0	1											1	1					2	1	1	5													62
63	Ensworth Medical College.—R.					10	0																							3	2													63
64	Kansas City Hahnemann Medical College.H.			1	0			2	0													1	0	45	1	1	0			2	2	1	0											64
65	St. Louis University, School of Medicine.—.R.					1	5			0	1													8	10	0	1	1	0	1	1													65
66	St. Louis College of Phys. and Surgs.—R.					6	0																					3	1	13	3													66
67	University Medical College, Kansas City.—R.					1	0																	35	1					1	0													67
68	Washington University, Med. Dept.—R.																																											68
		1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		

R—Regular; H—Homeopathic; E—Eclectic; Ph.M—Physiomedical; P—Panpathic.

Marginal Number	22 Minnesota		23 Mississippi		24 Missouri		25 Montana		26 Nebraska		27 Nevada		28 New Hampshire		29 New Jersey		30 New Mexico		31 New York		32 North Carolina		33 North Dakota		34 Ohio		35 Oklahoma		36 Oregon		37 Pennsylvania		38 Rhode Island		39 South Carolina		40 South Dakota		41 Tennessee		42 Texas		43 Utah		44 Vermont		45 Virginia		46 Washington		47 West Virginia		48 Wisconsin		49 Wyoming		Totals:	Examined—Passed	Examined—Failed	Percentage of Failures	No. States Ex. in	Marginal Number
	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F						
1																											0	1																													35	25	10	28.6	4	1
2			1	0																																					1	0															46	35	11	23.9	6	2
3																											5	3																													21	11	10	47.6	3	3
4																											1	0																													23	18	5	21.8	6	4
5																																																									3	2	1	33.3	1	5
6																																																	1	0							16	14	2	12.5	3	6
7															1	0																																	1	0							18	13	5	27.8	3	7
8											2	0																	1	0																											21	19	2	9.5	3	8
9																																																									5	4	1	20.0	1	9
10																																																									3	3	0	0.	1	10
11																																																									10	10	0	0.	1	11
12																											1	0			1	0																									14	14	0	0.	3	12
13					1	0													5	1									1	0			3	0							1	0															24	23	1	4.2	6	13
14															1	0			2	0			1	0					1	0					0	1	1	0									1	0			1	0					33	29	4	12.1	14	14
15																			3	0											3	0									1	0					1	0			1	0					25	22	3	12.0	10	15
16			0	1	1	0															2	0			1	0	1	0			2	2			0	2											1	0	1	0	1	0					39	25	14	35.9	19	16
17																																			4	1					1	0															78	70	8	10.3	5	17
18			0	1																	1	0									1	1			3	1																			1	0	59	49	10	17.0	9	18
19																															1	0																									5	5	0	0.	2	19
20																																																									7	7	0	0.	1	20
21																																			4	3													1	0							25	20	5	20.0	6	21
22							1	0	1	0																	0	1			2	0					2	1											0	1							45	32	13	28.9	11	22
23	1	1			1	0	1	1													1	0	3	0			1	1	1	0	4	1											1	0					1	0			1	0			131	116	15	11.5	17	23
24																							0	1																	1	0															21	12	9	42.9	6	24
25	1	0			1	0	6	1	1	0													1	0					0	3							8	0			1	0	1	0			1	0	5	1	1	1	3	0			154	132	22	14.3	20	25
26																			0	1									2	0	0	1									1	0	1	0			1	0	1	0			1	0			49	42	7	14.3	16	26
27									1	0																			0	1																											10	7	3	30.0	6	27
28																																																									20	16	4	20.0	2	28
29																																																									6	1	5	83.3	1	29
30	4	4			1	0	4	2															3	0					1	0							6	0					5	0					12	0			5	0			185	176	9	4.9	17	30
31																															1	0																									11	8	3	27.3	2	31
32	3	0			1	0	4	0															1	0	1	0			3	0							2	0	1	0			4	0					3	0					1	0	90	90	0	0.	16	32
33							1	0															0	1	1	0					1	0																									60	57	3	5.0	7	33
34					1	0																																																			25	24	1	4.0	3	34
35							0	1																					2	0							2	1											4	0					1	0	67	63	4	5.9	9	35
36																																																									11	11	0	0.	3	36
37					1	0																																											1	0							14	14	0	0.	3	37
38					3	0	1	1																																																	23	22	1	4.4	3	38
39			0	2																							0	1																													6	1	5	83.3	5	39
40			1	1	6	2	2	0					1	0													4	2	0	3	2	1			1	3			10	1	3	1	1	0			6	0			14	9			1	0	223	175	48	21.5	24	40
41																											2	0																													6	4	2	33.3	3	41
42			4	2																	1	0					4	0							2	0			1	0	6	0															110	104	6	5.5	13	42
43													1	0																																			0	1							24	22	2	8.3	4	43
44							1	0					2	1	1	1			11	0											8	4	0	2	2	0			1	0					2	0	4	0	0	1	3	0					95	76	19	20.0	22	44
45			1	0			1	0							2	0			3	1	1	1					1	0			12	1	4	0	0	1					1	0	1	0			1	0			20	3					75	66	9	12.0	17	45
46	1	0			2	0	1	0			1	0			3	0			13	0	1	0			1	0			2	0	7	0	1	0	1	0											2	0	1	0	1	0					74	74	0	0.	22	46
47																			2	0											10	5															6	2			3	1					53	30	23	43.4	10	47
48	1	0													1	1			1	0	12	0							1	0	12	4	0	1	1	2			1	0							4	0			5	0					107	85	22	20.6	18	48
49													1	0					2	1																													1	0							24	23	1	4.2	7	49
50													0	3																																	0	1									36	11	25	69.4	5	50
51					1	0							2	0	1	0			5	1	1	0			1	0	2	0					2	0									1	0	1	0			2	0							84	81	3	3.6	22	51
52													8	1					2	0													2	0															1	0							96	87	9	9.4	8	52
53																															1	0																									35	34	1	2.9	2	53
54																																																									6	4	2	33.3	1	54
55	1	0					7	0															1	0					1	0									2	0			1	0					7	1							80	79	1	1.2	11	55
56																			3	0											1	0																									21	21	0	0.	7	56
57	31	4					1	0															3	0					1	0							3	0											4	0			1	0			50	46	4	8.0	9	57
58	4	1					0	1															5	0					1	0							1	0															1	0			17	14	3	17.7	8	58
59			8	11																																			3	1																	23	11	12	52.2	2	59
60					3	2																																			1	0															6	4	2	33.3	2	60
61					15	5	0	1	1	0																	4	1	1	2							2	0			1	0							1	1	1	0					77	55	22	28.6	17	61
62																															1	0																									9	6	3	33.3	4	62
63					7	3			8	0																																															31	19	12	38.7	7	63
64					4	0	2	1																			2	1													1	0							1	1							28	23	5	17.9	7	64
65	1	0			12	0	1	0																			3	0	1	0													2	0													106	103	3	2.8	13	65
66			0	1	11	5																					1	0	0	1	1	0									3	1	1	1					1	0							56	29	27	48.2	14	66
67					16	3	1	0	1	0																	6	0			1	0																									56	49	7	12.5	8	67
68					48	0			1	0																	2	1	0	1																			1	0							92	89	3	3.3	8	68
	22		23		24		25		26		27		28		29		30		31		32		33		34		35		36		37		38		39		40		41		42		43		44		45		46		47		48		49							

TABLE B.—GRADUATES OF 1906 TO 1910 INCLUSIVE.

Marginal Number	NAME OF COLLEGE	1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		Marginal Number
		Alabama		Arizona		Arkansas		California		Colorado		Connecticut		Delaware		District of Columbia		Florida		Georgia		Idaho		Illinois		Indiana		Iowa		Kansas		Kentucky		Louisiana		Maine		Maryland		Massachusetts		Michigan		
		P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	
	NEBRASKA																																											
69	John A. Creighton, Medical College.—R.							1	0									0	1																									69
70	Lincoln Medical College.—E.																					0	1							1	0													70
71	University of Nebraska, College of Med.—R.																																											71
	NEW HAMPSHIRE																																											
72	Dartmouth Medical School.—R.											2	0																							1	0			9	1			72
	NEW YORK																																											
73	Albany Medical College.—R.																																											73
74	Columbia Univ. Coll. of Phys. and Surgs.—R.	1	0					4	0			1	0							1	0									3	0							1	0	3	0			74
75	Cornell University Medical College.—R.	1	0																					1	0			1	0					1	0	1	0			1	0			75
76	Eclectic Med. Coll., of City of New York.—E.																																											76
77	Fordham University, School of Medicine.—R.																																											77
78	Long Island College Hospital.—R.											2	0																															78
79	New York Homeo. Med. Coll. and Hosp.—H.							1	0																																			79
80	N. Y. Med. Coll. and Hosp. for Women.—H.																																											80
81	Syracuse University, College of Medicine.R.																																											81
82	University and Bellevue Hosp. and Med. Coll.—R.							2	0			2	0			1	0									1	0																	82
83	University of Buffalo, Medical Dept.—R.																															1	0									1	0	83
	NORTH CAROLINA																																											
84	Leonard School of Medicine.—R.	2	7															1	0	5	1																	0	1	0	1			84
85	North Carolina Medical College.																	1	0																									85
	OHIO																																											
86	Cleveland, Ohio, College P. and S.—R.																																											86
87	Cleveland Homeo. Medical College.—H.																																											87
88	Eclectic Medical College.—E.					0	1			0	1													2	1	1	1			0	1	2	1											88
89	Ohio-Miami Medical College.—R.									1	0																					3	0											89
90	Pulte Medical College.—H.																									1	0																	90
91	Starling-Ohio Medical College.—R.																					1	0																					91
92	Toledo Medical College.—R.																																											92
93	Western Reserve University, Medical Dept.—R.							1	0																			1	0															93
	OREGON																																											
94	Willamette University, Medical Dept.—R.																					1	0																					94
95	University of Oregon, Medical Dept.—R.							1	0																																			95
	PENNSYLVANIA																																											
96	Hahnemann Med. College and Hospital.—H.							2	1			4	0													1	0					1	0			2	1			1	0			96
97	Jefferson Medical College.—R.	2	0			2	0	1	0	1	0	3	0	4	0	0	1	1	0			2	0	5	0			5	0									3	0			1	0	97
98	Medico-Chirurgical Coll. of Philadelphia.—R.													2	0							1	0			0	1											1	0					98
99	Temple University, Medical Department.—R.																																											99
100	Univ. of Pennsylvania, Dept. of Med.—R.	2	0									1	0	2	0			1	0			1	0			3	0	1	0							5	0	14	0	4	0			100
101	Univ. of Pittsburgh, School of Medicine.—R.																																											101
102	Woman's Med. Coll. of Pennsylvania.—R.									1	0			1	0	0	1																							1	0			102
	SOUTH CAROLINA																																											
103	Med. Coll. of the State of So. Carolina.—R.			0	2			1	0									4	2	2	0																							103
	TENNESSEE																																											
104	College of Physicians and Surgs., Memphis.—R.					2	2																											1	0									104
105	Knoxville Medical College.—R.	0	1																	0	1																							105
106	Memphis Hospital Medical College.—R.	2	4			12	2											2	0															12	11									106
107	Meharry Medical College.—R.	0	5			4	3											2	1	15	4			2	4							2	4	1	3									107
108	Tennessee Medical College.—R.																																											108
109	Universities of Nashville and Tenn., Med. Dept.—R.	9	5			4	0											3	1	3	0			1	0							2	0	7	0									109
110	University of West Tennessee, Med. Dept.—R.																																											110
111	Vanderbilt University, Medical Department.—R.	3	0					4	0	2	0							1	0	1	0			3	0							1	0	2	0									111
	TEXAS																																											
112	Baylor University, College of Medicine.—R.					1	0																																					112
113	Fort Worth University, Medical Dept.—R.																																											113
114	Southwestern University Medical College.—R.					4	0																																					114
115	University of Texas, Dept. of Medicine.—R.																																											115
	VERMONT																																											
116	University of Vermont, College of Medicine.—R.							1	0			1	0																							1	0			2	0			116
	VIRGINIA																																											
117	Medical College of Virginia.—R.																	1	0					1	0																			117
118	University of Virginia, Dept. of Medicine.—R.	2	0									1	0	1	0	1	0																					2	0					118
119	University College of Medicine.—R.																	1	0																			0	1	0	2			119
	WISCONSIN																																											
120	Marquette University, Medical Dept.—R.																			1	0																							120
121	Wisconsin College of Phys. and Surgs.—R.																																											121
	CANADIAN																																											
122	Laval University, Medical Dept.																																			2	1			0	1			122
123	Manitoba Medical College.																																											123
124	McGill University, Medical Faculty.							1	0															2	0											2	0			3	0			124
125	Queen's University, Medical Faculty.					1	0					1	0													1	0	1	0									1	0					125
126	University of Toronto, *Faculty of Medicine.*							1	0																																			126
127	Western University, Medical Dept.							1	0																																			127
128	Foreign Colleges.							3	1							1	1	1	1																					0	3			128
129	Miscellaneous Medical Colleges.	2	7			1	0	11	2	20	0	3	1	5	0			1	2	5	1	3	1	12	10	2	1	2	0			4	7	0	2			4	2	1	3	0	0	129
	Total by States	150		14		110		144		49		70		20		41		81		152		41		698		93		114		81		142		123		67		154		220		126		
	Totals—Examined—Passed	88		10		85		125		45		57		19		29		69		145		29		604		93		111		63		110		96		62		126		170		123		
	Totals—Examined—Failed	62		4		25		19		4		13		1		12		12		7		12		94		6		3		18		32		27		5		28		50		3		
	Percentage of Failures	41.3		28.6		22.7		13.2		8.2		18.6		5.0		29.3		14.8		4.6		29.3		13.5		6.1		2.6		22.2		22.5		22.0		7.5		18.2		22.8		2.4		
		1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18		19		20		21		

R—Regular; H—Homeopathic; E—Eclectic; Ph.M—Physiomedical; P—Panpathic.

Marginal Number	22 Minnesota		23 Mississippi		24 Missouri		25 Montana		26 Nebraska		27 Nevada		28 New Hampshire		29 New Jersey		30 New Mexico		31 New York		32 North Carolina		33 North Dakota		34 Ohio		35 Oklahoma		36 Oregon		37 Pennsylvania		38 Rhode Island		39 South Carolina		40 South Dakota		41 Tennessee		42 Texas		43 Utah		44 Vermont		45 Virginia		46 Washington		47 West Virginia		48 Wisconsin		49 Wyoming		Totals:	Examined—Passed	Examined—Failed	Percentage of Failures	No. States Ex. in	Marginal Number
	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F	P	F						
69							3	0	39	0																			1	0							2	0													1	0					2	0	50	49	1	2.0	9	69
70									11	0																																													2	0	15	14	1	6.7	4	70
71									14	0																																															14	14	0	0.	1	71
72													7	0																			1	0																							21	20	1	4.8	3	72
73							1	0											38	3																																					42	39	3	7.1	2	73
74	2	0			2	0	2	0							4	0			65	1							1	0			5	0	1	0															[illegible]	0							100	99	1	1.0	10	74
75													1	0	1	0			64	0																																					72	72	0	0.	9	75
76															2	0			6	4																																					12	8	4	33.3	2	76
77																			2	0																																					2	2	0	0.	1	77
78															2	2			60	9																							1	0													76	65	11	14.5	4	78
79															3	0			17	4																																					25	21	4	16.0	3	79
80																			0	2																																					2	0	2	100	1	80
81	1	0																	21	3											1	0					1	0																			27	24	3	11.1	4	81
82															2	0			65	1							1	0	0	1																											77	75	2	2.6	[illegible]	82
83																			35	3																																					40	37	3	7.5	3	83
84																					5	3					1	1			0	1			0	4			1	0																	45	22	23	51.1	11	84
85																	1	0			10	2													0	2					1	0									1	0					18	14	4	22.2	6	85
86																									19	0					1	0																									20	20	0	0.	2	86
87							1	0											1	0					4	1	1	0			1	0																									9	8	1	11.1	5	87
88																									7	2			0	1	2	0					1	0													2	4					30	17	13	43.3	11	88
89							1	0																	35	4																															44	40	4	9.1	4	89
90																									3	0					1	0																									5	5	0	0.	3	90
91																									12	1					1	0																									45	44	1	2.2	3	91
92																									9	0																															9	9	0	0.	1	92
93																									21	0			1	0													1	0					1	0							26	26	0	0.	6	93
94																													7	1																			2	0							11	10	1	9.1	3	94
95																													11	4																			5	0							21	17	4	19.0	3	95
96	2	1													3	1			2	0					1	0	1	0			27	4																					1	0			56	48	8	14.3	13	96
97	3	2	1	0			2	0							9	0			4	0	11	0	1	0	3	0	1	0	2	1	59	0	2	0	1	0					1	0	6	0					3	0	5	0	1	0			149	145	4	2.7	31	97
98															1	0			1	0							1	0			55	8									1	0	1	1													75	65	10	13.3	10	98
99																															32	3																									35	32	3	8.6	1	99
100	1	0	1	0											8	0			8	0	5	0			3	0	1	0	0	1	67	2							1	0	1	0	2	0			5	0	1	1	2	0					164	160	4	2.4	25	100
101																													2	2	53	6																			5	1					75	66	9	12.0	3	101
102					1	0	1	0							3	0			5	2									1	0	16	0									1	0	1	0							2	0					37	34	3	8.1	13	102
103																																			34	12											1	0									58	42	16	27.6	6	103
104			3	3																							1	0											6	2	1	0															21	14	7	33.3	6	104
105			0	1																																				0																	4	1	3	75.0	3	105
106			10	15																																				2	10	0					1	0									118	82	36	30.5	10	106
107			1	2	2	1																																		7	5	0									1	2					99	57	42	42.4	17	107
108																					1	1							0	2									19	1																	24	20	4	16.7	3	108
109			5	4			0	1									1	0	1	0							2	0			2	0			1	0			29	4	5	0															90	75	15	16.7	16	109
110																					1	0					1	2							0	1			2	1							0	1									9	4	5	55.6	5	110
111			3	0	1	1	1	0													1	0					2	0							1	2			10	0	5	0							1	0							45	42	3	6.7	17	111
112																																									8	0															9	9	0	0.	2	112
113																											2	0													19	0															21	21	0	0.	2	113
114																											1	0													11	0															16	16	0	0.	3	114
115					1	0													1	0																					34	0															36	36	0	0.	3	115
116													4	0																	1	0	2	1											15	1			1	0							30	28	2	6.7	9	116
117																					2	0									1	0			1	0											28	0			5	0					39	39	0	0.	7	117
118																											1	0											1	0							20	0			2	0					31	31	0	0.	9	118
119															2	1			0	1	5	1					1	0					0	1													13	1			1	0					31	23	8	25.8	10	119
120	1	4																					2	0																									0	2			39	7			56	43	13	23.2	5	120
121																							1	0																													6	0			7	7	0	0.	2	121
122	0	1											2	2									1	0									0	1																							11	5	6	54.5	6	122
123																																																														123
124	2	0											1	0					3	0																													1	0			1	0			19	19	0	0.	12	124
125															0	1			6	0																																					16	15	1	6.3	11	125
126	2	0					3	0											3	1									1	0	1	0																	1	0							18	17	1	5.6	9	126
127																							1	0	2	0			1	0																			1	0							6	6	0	0.	5	127
128							1	0							0	1			7	4					2	0					1	0											1	0	1	0							1	0			30	19	11	36.7	[illegible]	128
129	0	1	0	1	1	1	1	3			0	1			0	1	1	0	1	0	[illegible]	[illegible]	1	0	3	1	5	2	2	4	8	1	0	1	2	3	4	1	20	5	4	0	1	[illegible]			5	2	7	3	7	2					247	172	75	30.4	[illegible]	129
	81		84		197		61		78		4		37		60		3		511		87		33		171		87		79		483		25		98		39		183		132		35		20		119		92		107		68		8		5678					
	62		39		174		47		78		3		30		51		3		468		76		31		162		67		50		437		18		58		36		159		130		33		19		108		79		84		61		8			4830				
	19		45		23		14		0		1		7		9		0		43		11		2		9		20		29		46		7		40		3		24		2		2		1		11		13		23		7		0				848			
	23.4		53.6		11.7		22.9		0.		25.0		18.9		15.0		0.		8.4		12.6		6.1		5.3		2.30		36.7		9.5		28.0		40.8		7.7		13.1		1.5		5.7		5.0		9.2		14.1		21.5		10.3		0.					14.9		
	22		23		24		25		26		27		28		29		30		31		32		33		34		35		36		37		38		39		40		41		42		43		44		45		46		47		48		49							

TABLE C.—GRADUATES EXAMINED

Marginal Number	NAME OF COLLEGE	Graduates of All Years.					Graduates of 1906-1910.					Graduates of 1905 and Previous.					Graduates of 1910.					Marginal Number
		Number Examined	Number Passed	Number Failed	Per Cent. Failed	Number of States	Number Examined	Number Passed	Number Failed	Per Cent. Failed	Number of States	Number Examined	Number Passed	Number Failed	Per Cent. Failed	Number of States	Number Examined	Number Passed	Number Failed	Per Cent. Failed	Number of States	
	ALABAMA																					
1	Birmingham Medical College.—R.	35	25	10	28.6	4	35	25	10	28.6	4	....	....	....	....	....	22	14	8	36.4	3	1
2	University of Alabama, Medical Department.—R.	48	36	12	25.0	7	46	35	11	23.9	6	2	1	1	50.0	2	34	27	7	20.6	6	2
	ARKANSAS																					
3	College of Physicians and Surgeons.—R.	21	11	10	47.6	3	21	11	10	47.6	3	....	....	....	....	....	18	9	9	50.0	3	3
4	University of Arkansas, Medical Dept.—R.	23	18	5	21.8	6	23	18	5	21.8	6	....	....	....	....	....	18	15	3	16.7	2	4
	CALIFORNIA																					
5	California Eclectic Medical College.—E.	5	3	2	40.0	1	3	2	1	33.3	1	2	1	1	50.0	1	2	1	1	50.0	1	5
6	College of P. and S., Los Angeles.—R.	16	14	2	12.5	3	16	14	2	12.5	3	....	....	....	....	....	10	10	0	0.	2	6
7	College of P. and S., San Francisco.—R.	22	15	7	31.8	5	18	13	5	27.8	3	4	2	2	50.0	3	4	3	1	25.0	1	7
8	Cooper Medical College.—R.	24	22	2	8.3	4	21	19	2	9.5	3	3	3	0	0.	3	16	14	2	12.5	2	8
9	Hahnemann Medical College of the Pacific.—H.	6	5	1	16.7	2	5	4	1	20.0	1	1	1	0	0.	1	1	1	0	0.	1	9
10	Oakland College of Medicine and Surgery.—R.	3	3	0	0.	1	3	3	0	0.	1	....	....	....	....	....	3	3	0	0.	1	10
11	University of California, Medical Dept.—R.	11	10	1	9.1	2	10	10	0	0.	1	1	0	1	100.0	1	7	7	0	0.	1	11
	COLORADO																					
12	University of Colorado, Medical Dept.—R.	15	15	0	0.	4	14	14	0	0.	3	1	1	0	0.	1	9	9	0	0.	2	12
	CONNECTICUT																					
13	Yale Medical School.	28	27	1	3.6	8	24	23	1	4.2	6	4	4	0	0.	3	9	9	0	0.	2	13
	DISTRICT OF COLUMBIA																					
14	George Washington University.—R.	38	34	4	10.5	15	33	29	4	12.1	14	5	5	0	0.	4	10	10	0	0.	4	14
15	Georgetown University, School of Medicine.—R.	28	24	4	14.3	12	25	22	3	12.0	10	3	2	1	33.3	3	7	7	0	0.	4	15
16	Howard University, Medical Department.—R.	44	30	14	31.8	20	39	25	14	35.9	19	5	5	0	0.	5	8	7	1	12.5	8	16
	GEORGIA																					
17	Atlanta College of Phys. and Surgs.—R.	81	72	9	11.1	6	78	70	8	10.7	5	3	2	1	33.3	3	69	65	4	5.8	5	17
18	Atlanta School of Medicine.—R.	59	49	10	17.0	8	59	49	10	17.0	9	....	....	....	....	....	50	44	6	12.0	8	18
19	*Georgia College of Eclectic M. and S.*—E.	6	5	1	16.7	2	5	5	0	0.	2	1	0	1	100.0	1	5	5	0	0.	2	19
20	Hospital Medical College, Atlanta.—E.	7	7	0	0.	1	7	7	0	0.	1	....	....	....	....	....	6	6	0	0.	1	20
21	Medical College of Georgia.—R.	29	22	7	24.1	7	25	20	5	20.0	6	4	2	2	50.0	2	17	16	1	5.9	2	21
	ILLINOIS																					
22	Bennett Medical College.—R.	47	32	15	31.9	12	45	32	13	28.9	11	2	0	2	100.0	2	33	26	7	21.2	6	22
23	Chicago College of Medicine and Surgery.—R.	133	117	16	12.0	18	131	116	15	11.5	17	2	1	1	50.0	2	108	99	9	8.3	11	23
24	College of Medicine and Surgery.—Ph.M.	21	12	9	42.9	6	21	12	9	42.9	6	....	....	....	....	....	13	9	4	30.8	3	24
25	College of Physicians and Surgeons.—R.	185	159	26	14.1	24	154	132	22	14.3	20	31	27	4	12.9	15	120	104	16	3.3	15	25
26	Hahnemann Medical College and Hospital.—H.	57	47	10	17.5	19	49	42	7	14.3	16	8	5	3	37.5	6	28	26	2	7.1	5	26
	Hering Medical College.—H.	10	7	3	30.0	6	10	7	3	30.0	6	....	....	....	....	....	9	7	2	22.2	5	27
	Jenner Medical College.—R.	20	16	4	20.0	2	20	16	4	20.0	2	....	....	....	....	....	19	15	4	21.1	1	28
	National Medical University.—P.	6	1	5	83.3	1	6	1	5	83.3	1	....	....	....	....	....	....	....	....	....	....	29
	Northwestern University Medical School.—R.	206	195	11	5.3	20	185	176	9	4.9	17	21	19	2	9.5	11	136	133	3	2.2	11	30
31	Reliance Medical College.—R.	11	8	3	27.3	2	11	8	3	27.3	2	....	....	....	....	....	8	8	0	0.	2	31
32	Rush Medical College.—R.	130	120	10	7.7	21	90	90	0	0.	16	40	30	10	25.0	15	65	65	0	0.	9	32
	INDIANA																					
33	Indiana University, School of Medicine.—R.	60	57	3	5.0	7	60	57	3	5.0	7	....	....	....	....	....	56	55	1	1.8	6	33
	IOWA.																					
34	Drake University, College of Medicine.—R.	27	24	3	11.1	5	25	24	1	4.0	3	2	0	2	100.0	2	23	23	0	0.	2	34
35	State University of Iowa, College of Med.—R.	78	72	6	7.7	10	67	63	4	5.9	9	11	9	2	18.1	6	51	52	2	3.7	4	35
36	State Univ. of Iowa, Homeopathic Dept.—H.	15	15	0	0.	6	11	11	0	0.	3	4	4	0	0.	3	10	10	0	0.	2	36
	KANSAS																					
37	Kansas Medical College.—R.	17	15	2	11.8	3	14	14	0	0.	3	3	1	2	66.7	3	12	12	0	0.	1	37
38	University of Kansas, School of Medicine.—R.	23	22	1	4.4	3	23	22	1	4.4	3	....	....	....	....	....	21	21	0	0.	2	38
	KENTUCKY																					
39	Louisville National Medical College.—R.	6	1	5	16.7	5	6	1	5	83.3	5	....	....	....	....	....	5	1	4	80.0	4	39
40	University of Louisville, Medical Dept.—R.	236	183	53	22.5	27	223	175	48	21.5	24	13	8	5	38.4	11	194	159	35	18.0	19	40
	LOUISIANA																					
41	Flint Medical College—R.	6	4	2	33.3	3	6	4	2	33.3	3	....	....	....	....	....	4	2	2	50.0	3	41
42	Tulane University, Medical Department.—R.	120	114	6	5.0	16	110	104	6	5.5	13	10	10	0	0.	8	97	92	5	5.2	10	42
	MAINE																					
43	Medical School of Maine.—R.	32	30	2	6.7	9	24	22	2	8.3	4	8	8	0	0.	6	22	20	2	9.1	3	43
	MARYLAND																					
44	Baltimore Medical College.—R.	108	82	26	24.1	25	95	76	19	20.0	22	13	6	7	53.8	8	57	51	6	10.5	11	44
45	College of Physicians and Surgeons.—R.	85	72	13	15.3	20	75	66	9	12.0	17	10	6	4	40.0	8	59	51	8	13.6	16	45
46	Johns Hopkins University, Medical Dept.—R.	84	83	1	1.2	24	74	74	0	0.	22	10	9	1	10.0	7	44	44	0	0.	16	46
47	Maryland Medical College.—R.	59	32	27	45.8	13	53	30	23	43.4	10	6	2	4	66.7	5	34	19	15	44.1	9	47
48	University of Maryland, School of Medicine.—R.	116	92	24	20.7	21	107	85	22	20.6	18	9	7	2	22.2	6	85	68	17	20.0	13	48
	MASSACHUSETTS																					
49	Boston University School of Medicine.—H.	33	29	4	12.1	8	24	23	1	4.2	7	9	6	3	33.3	5	15	15	0	0.	4	49
50	College of Physicians and Surgeons.—R.	36	11	25	69.4	5	36	11	25	69.4	5	....	....	....	....	....	14	7	7	50.0	3	50
51	Harvard Medical School.—R.	99	94	5	5.1	25	84	81	3	3.6	22	15	13	2	13.3	11	43	43	0	0.	9	51
52	Tufts College Medical School.—R.	102	92	10	9.8	10	96	87	9	9.4	8	6	5	1	16.7	4	61	56	5	8.2	5	52
	MICHIGAN																					
53	Detroit College of Medicine.—R.	45	44	1	2.2	8	35	34	1	2.9	2	10	10	0	0.	7	34	33	1	2.9	2	53
54	Detroit Homeopathic College.—H.	6	4	2	33.3	1	6	4	2	33.3	1	....	....	....	....	....	5	4	1	20.0	1	54
55	Univ. of Mich., Dept. of Med. and Surg.—R.	101	95	6	5.9	16	80	79	1	1.2	11	21	16	5	23.8	11	67	67	0	0.	7	55
56	Univ. of Michigan, Homeopathic College.—H.	21	21	0	0.	7	21	21	0	0.	7	....	....	....	....	....	15	15	0	0.	3	56
	MINNESOTA																					
57	Univ. of Minn., Coll. of *Medicine* and Surg.—R.	65	60	5	7.7	9	50	46	4	8.0	9	15	14	1	6.7	7	30	27	3	10.0	3	57
58	Hamline University, Medical Department.—R.	19	16	3	15.8	9	17	14	3	17.7	8	2	2	0	0.	2	1	1	0	0.	1	58
	MISSISSIPPI																					
59	Mississippi Medical College.—R.	23	11	12	52.2	2	23	11	12	52.2	2	....	....	....	....	....	15	7	8	53.3	2	59
	MISSOURI																					
60	American Medical College.—E.	8	4	4	50.0	4	6	4	2	33.3	2	2	0	2	100.0	2	5	4	1	20.0	2	60
61	Barnes Medical College.—R.	90	62	28	31.1	18	77	55	22	28.6	17	13	7	6	46.2	8	60	45	15	25.0	13	61
62	Eclectic Medical University, Kansas City	10	6	4	40.0	4	9	6	3	33.3	4	1	0	1	100.0	1	8	6	2	25.0	3	62
63	Ensworth Medical College.—R.	35	20	15	42.9	10	31	19	12	38.7	7	4	1	3	75.0	4	20	16	4	20.0	3	63
64	Kansas City Hahnemann Medical College.—H.	29	23	6	20.7	8	28	23	5	17.9	7	1	0	1	100.0	1	19	19	0	0.	6	64
65	St. Louis University, School of Med.—R.	109	104	5	4.6	14	106	103	3	2.8	13	3	1	2	66.7	2	90	90	0	0.	8	65
66	St.Louis College of Phys. and Surgs.—R.	67	39	28	41.8	18	56	29	27	48.2	14	11	10	1	9.1	8	19	16	3	15.8	5	66
67	University Medical College, Kansas City.—R.	67	55	12	17.9	14	56	49	7	12.5	8	11	6	5	45.5	9	51	47	4	7.8	7	67
68	Washington University, Medical Dept.—R.	95	92	3	3.2	8	92	89	3	3.3	8	3	3	0	0.	3	85	85	3	3.4	5	68

R—Regular; H—Homeopathic; E—Eclectic; Ph.M—Physiomedical; P—Panpathic.

Marginal Number	NAME OF COLLEGE	Graduates of All Years.					Graduates of 1906-1910.					Graduates of 1905 and Previous.					Graduates of 1910.					Marginal Number
		Number Examined	Number Passed	Number Failed	Per Cent. Failed	Number of States	Number Examined	Number Passed	Number Failed	Per Cent. Failed	Number of States	Number Examined	Number Passed	Number Failed	Per Cent. Failed	Number of States	Number Examined	Number Passed	Number Failed	Per Cent. Failed	Number of States	
	NEBRASKA																					
69	John A. Creighton Medical College.—R.	53	52	1	1.9	8	50	49	1	2.0	8	3	3	0	0.	2	42	41	1	2.4	3	69
70	Lincoln Medical College.—E.	15	14	1	6.7	4	15	14	1	6.7	4	....	....	....	....	....	12	12	0	0.	3	70
71	University of Nebraska, College of Med.—R.	18	16	2	11.1	4	14	14	0	0.	1	4	2	2	50.0	3	14	14	0	0.	1	71
	NEW HAMPSHIRE																					
72	Dartmouth Medical School.—R.	22	20	2	9.1	5	21	20	1	4.8	5	1	0	1	100.0	1	7	7	0	0.	2	72
	NEW YORK																					
73	Albany Medical College.—R.	50	47	3	6.0	8	42	39	3	7.1	2	8	8	0	0.	6	26	23	3	11.5	1	73
74	Columbia Univ. Coll. of Phys. and Surgs.—R.	116	115	1	0.9	20	100	99	1	1.0	16	16	16	0	0.	10	43	42	1	2.3	7	74
75	Cornell University Medical College.—R.	76	76	0	0.	13	72	72	0	0.	9	4	4	0	0.	4	50	50	0	0.	3	75
76	Eclectic Medical College of City of N. Y.—E.	12	8	4	33.3	2	12	8	4	33.3	2	....	....	....	....	....	10	6	4	40.0	2	76
77	Fordham University, School of Medicine.—R.	2	2	0	0.	1	2	2	0	0.	1	....	....	....	....	....	2	2	0	0.	1	77
78	Long Island College Hospital.—R.	80	69	11	13.7	8	76	65	11	14.5	4	4	4	0	0.	4	41	35	6	14.6	3	78
79	New York Homeopathic Med. Coll. and Hosp.—H.	28	23	5	17.9	4	25	21	4	16.0	3	3	2	1	33.3	2	16	13	3	18.7	2	79
80	N. Y. Med. Coll. and Hospital for Women.—H.	3	1	2	66.7	2	2	0	2	100.0	1	1	1	0	0.	1	2	0	2	100.0	1	80
81	Syracuse University, College of Medicine.—R.	30	25	5	16.7	5	27	24	3	11.1	4	3	1	2	66.7	1	21	18	3	14.3	3	81
82	University and Bellevue Hospital Med. Coll.—R.	84	79	5	6.0	14	77	75	2	2.6	8	7	4	3	42.9	7	43	42	1	2.3	4	82
83	University of Buffalo, Medical Dept.—R.	48	42	6	12.5	9	40	37	3	7.5	3	8	5	3	37.5	7	25	22	3	12.0	1	83
	NORTH CAROLINA																					
84	Leonard School of Medicine.—R.	48	23	25	52.1	12	45	22	23	51.1	11	3	1	2	66.7	3	28	16	12	42.9	6	84
85	North Carolina Medical College	18	14	4	22.2	6	18	14	4	22.2	6	....	....	....	....	....	13	10	3	23.1	3	85
	OHIO																					
86	Cleveland College of Phys. and Surgs.—R.	23	22	1	4.4	3	20	20	0	0.	2	3	2	1	33.3	2	20	20	0	0.	2	86
87	Cleveland Homeo. Medical College.—H.	18	13	5	27.8	8	9	8	1	11.1	5	9	5	4	44.4	4	5	4	1	20.0	2	87
88	Eclectic Medical College.—E.	35	20	15	42.9	15	30	17	13	43.3	11	5	3	2	40.0	5	22	13	9	40.9	8	88
89	Ohio-Miami Medical College.—R.	44	40	4	9.1	4	44	40	4	9.1	4	....	....	....	....	....	43	39	4	9.3	3	89
90	Pulte Medical College.—H.	7	6	1	14.3	4	5	5	0	0.	3	2	1	1	50.0	1	5	5	0	0.	3	90
91	Starling-Ohio Medical College.—R.	48	47	1	2.1	5	45	44	1	2.2	3	3	3	0	0.	3	42	42	0	0.	2	91
92	Toledo Medical College.—R.	9	9	0	0.	1	9	9	0	0.	1	....	....	....	....	....	9	9	0	0.	1	92
93	Western Reserve University, Medical Dept.—R.	28	27	1	3.6	6	26	26	0	0.	6	2	1	1	50.0	2	22	22	0	0.	2	93
	OREGON																					
94	Willamette University, Medical Dept.—R.	12	10	2	16.7	3	11	10	1	9.1	3	1	0	1	100.0	1	4	4	0	0.	3	94
95	University of Oregon, Medical Dept.—R.	21	17	4	19.0	3	21	17	4	19.0	3	....	....	....	....	....	12	10	2	16.7	2	95
	PENNSYLVANIA																					
96	Hahnemann Medical College and Hosp.—H.	63	54	9	14.3	15	56	48	8	14.3	13	7	6	1	14.3	6	39	34	5	12.8	7	96
97	Jefferson Medical College.—R.	174	166	8	4.6	33	149	145	4	2.7	31	25	21	4	16.0	13	105	105	0	0.	20	97
98	Medico-Chirurgical College of Philadelphia.—R.	87	75	12	13.8	16	75	65	10	13.3	10	12	10	2	16.7	10	69	61	8	11.6	7	98
99	Temple University, Medical Dept.—R.	35	32	3	8.6	1	35	32	3	8.6	1	....	....	....	....	....	35	32	3	8.6	1	99
100	University of Pennsylvania, Dept. of Medicine.—R.	196	191	5	2.6	29	164	160	4	2.4	25	32	31	1	3.1	15	124	122	2	1.6	16	100
101	University of Pittsburgh, School of Med.—R.	75	66	9	12.0	3	75	66	9	12.0	3	....	....	....	....	....	60	55	5	8.3	2	101
102	Woman's Med. Coll. of Pennsylvania.—R.	41	38	3	7.3	14	37	34	3	8.1	13	4	4	0	0.	3	20	20	0	0.	5	102
	SOUTH CAROLINA																					
103	Med. Coll. of the State of South Carolina.—R.	61	44	17	27.9	6	58	42	16	27.6	6	3	2	1	33.3	3	41	29	12	29.3	6	103
	TENNESSEE																					
104	College of Physicians and Surgs., Memphis.—R.	21	14	7	33.3	6	21	14	7	33.3	6	....	....	....	....	....	15	11	4	26.7	5	104
105	Knoxville Medical College.—R.	5	1	4	80.0	5	4	1	3	75.0	3	1	0	1	100.0	1	1	1	0	0.	1	105
106	Memphis Hospital Medical College.—R.	135	93	42	31.1	13	118	82	36	30.5	10	17	11	6	35.3	9	99	73	26	26.3	8	106
107	Meharry Medical College.—R.	103	59	44	42.7	17	99	57	42	42.4	17	4	2	2	50.0	4	65	41	24	36.9	15	107
108	Tennessee Medical College.—R.	29	22	7	24.1	4	24	20	4	16.7	3	5	2	3	60.0	3	19	19	0	0.	2	108
109	Univ. of Nashville and Tennessee Med. Dept.—R.	109	84	25	22.9	21	90	75	15	16.7	16	19	9	10	52.6	12	53	47	6	11.3	10	109
110	University of West Tennessee, Med. Dept.—R.	9	4	5	55.6	5	9	4	5	55.6	5	....	....	....	....	....	7	3	4	57.1	5	110
111	Vanderbilt University, Medical Dept.—R.	55	50	5	9.1	19	45	42	3	6.7	17	10	8	2	20.0	8	26	24	2	7.7	12	111
	TEXAS																					
112	Baylor University, College of Medicine.—R.	11	10	1	9.1	3	9	9	0	0.	2	2	1	1	50.0	2	9	9	0	0.	2	112
113	Fort Worth University, Medical Dept.—R.	21	21	0	0.	2	21	21	0	0.	2	....	....	....	....	....	21	21	0	0.	2	113
114	Southwestern University Medical College.—R.	16	16	0	0.	3	16	16	0	0.	3	....	....	....	....	....	16	16	0	0.	3	114
115	University of Texas, Dept. of Medicine.—R.	37	37	0	0.	3	36	36	0	0.	3	1	1	0	0.	1	32	32	0	0.	2	115
	VERMONT																					
116	University of Vermont, College of Med.—R.	35	32	3	8.6	10	30	28	2	6.7	9	5	4	1	20.0	3	17	15	2	11.8	4	116
	VIRGINIA																					
117	Medical College of Virginia.—R.	43	43	0	0.	10	39	39	0	0.	7	4	4	0	0.	4	33	33	0	0.	4	117
118	University of Virginia, Dept. of Med.—R.	37	36	1	2.7	10	31	31	0	0.	9	6	5	1	16.7	4	19	19	0	0.	4	118
119	University College of Medicine.—R.	32	24	8	25.0	11	31	23	8	25.8	10	1	1	0	0.	1	22	19	3	13.6	4	119
	WISCONSIN																					
120	Marquette University, Medical Dept.—R.	61	48	13	21.3	6	56	43	13	23.2	5	5	5	0	0.	3	44	35	9	20.5	5	120
121	Wisconsin College of Physicians and Surgs.—R.	7	7	0	0.	2	7	7	0	0.	2	....	....	....	....	....	4	4	0	0.	1	121
	CANADIAN																					
122	Laval University, Medical Dept.	22	11	11	50.0	9	11	5	6	54.5	6	11	6	5	45.5	8	1	0	1	100.0	1	122
123	Manitoba Medical College	3	3	0	0.	2	....	....	....	....	....	3	3	0	0.	2	....	....	....	....	....	123
124	McGill University, Medical Faculty	28	28	0	0.	16	19	19	0	0.	12	9	9	0	0.	9	7	7	0	0.	5	124
125	Queen's University, Medical Faculty	20	18	2	10.0	12	16	15	1	6.3	11	4	3	1	25.0	3	2	2	0	0.	2	125
126	University of Toronto, Faculty of Medicine	31	27	4	12.9	11	18	17	1	5.6	9	13	10	3	23.1	8	1	1	0	0.	1	126
127	Western University, Medical Dept.	8	7	1	12.5	5	6	6	0	0.	5	2	1	1	50.0	1	3	3	0	0.	2	127
128	Foreign Colleges	108	70	38	35.2	24	30	19	11	36.7	12	78	51	27	34.6	21	3	3	0	0.	2	128
129	Miscellaneous Medical Colleges	478	311	167	34.9	45	247	172	75	30.4	40	231	139	92	40.0	39	84	70	14	16.7	17	129
130	Undergraduates	353	192	161	45.6	4	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	130
	Totals	7004	5712	1292	18.4	....	5678	4830	848	14.9	....	973	690	283	29.1	....	3976	3544	432	10.[illegible]	...	

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[*For other information see second page following reading matter*]

SATURDAY, MAY 27, 1911

VALUE OF STATE BOARD STATISTICS

For the eighth consecutive year we present this week tabulated statistics based on the examinations conducted by state medical examining and licensing boards. With the exception of one or two of the minor sectarian boards, our returns for the year 1910, published in this issue, are complete; in fact we have not heretofore had such ready and complete cooperation on the part of the state licensing boards. This is in marked contrast with the conditions in 1903, when reports from a large number of boards could not be obtained for the simple reason that no records whatever were kept by them.

As the first essential of any progressive business enterprise is a system of records by which it may be known just how much is being accomplished each day as compared with the same day of the previous week, month or year, so in the effort to improve the training of physicians and to safeguard better the public against incompetence, the collection and publication of accurate statistics based on the examinations of state licensing boards are extremely important and helpful.

These statistics, which appear on pages 1558 to 1575, are worthy of careful study. As will be noted (Table A), they show for each state the medical college at which each applicant obtained his degree, the total number of applicants examined, the number registered, the number rejected and the percentage rejected. They show the number of non-graduates examined and (Table K) the number registered under exemption clauses or through interstate reciprocity. They also allow of comparisons of the results in any one state with the results in other states. Occasionally it is seen that a state board registers every applicant who applies; and again a board may appear to be very lenient with graduates of medical schools located in its own state (Table F), although the graduates of those schools may receive high failure percentages elsewhere.

For each medical college, these statistics show (Tables A and B) in what states its graduates appeared for examination, the number who passed and failed in each state, the total examined in all states, the number who passed, the number who failed and the percentage of failures. They permit a comparative study of medical colleges and furnish an important side-light on any investigation of medical colleges which may be undertaken.

These statistics also show the number of candidates coming from Canadian and other foreign medical colleges. In short, they give an accurate record of the number and source of those who are entering the practice of medicine each year in this country—information which was not available prior to 1904 when THE JOURNAL began the publication of these statistics.

Without the data published this week, it could not be known that 7,352 physicians were licensed in this country during 1910, and that this included 5,712 who were registered by examination, 138 who were registered under the various exemption clauses and 1,502, mostly old practitioners, who were registered under the provision for reciprocity.

But these statistics have been much more than a mere numerical record of the physicians examined and licensed. They have exerted and are exerting a tremendous influence toward the betterment of conditions underlying the education and the licensing of physicians. Probably no one has recognized the value of these statistics more than have the state licensing boards themselves. As a result, in many states splendid systems of record-keeping are now to be found where formerly, in several states at least, no records whatever were kept, and in many others the systems were far from perfect. Again, there has been a marked progress in the methods of conducting examinations and in the character of those examinations.

The publication of these statistics showing the failures of college graduates at the state license examinations has also stimulated the colleges to make improvements in their equipment, to secure better teachers and to adopt better methods of teaching.

It should be stated that from the official data in the possession of the Council on Medical Education, which has in charge the collection and tabulation of these statistics, a check is now provided for every report whereby duplications are avoided, errors are corrected and the statistics are rendered accurate and reliable. We again express our acknowledgments not only to the officers of the state licensing boards whose carefully prepared reports have made the publication of these statistics possible, but also to the medical colleges whose earnest cooperation in sending complete lists of their graduates has aided in making these statistics accurate.

The colleges and the state boards have reason to feel gratified, therefore, not only because of the direct aid which these statistics are capable of furnishing, but also because the publication of this valuable information, made possible by their carefully prepared reports, is doing much to unify and to better the conditions underlying the training and the licensing of physicians in this country.

PROTECTIVE INOCULATION AGAINST DYSENTERY

In this country bacillary dysentery occurs under two special conditions, namely, as a variety of summer diarrhea in infants and as an institutional disease, especially in hospitals for the insane, the so-called institutional dysentery. In both cases there is need of effective prevention. Protective inoculation does not appear to have given satisfactory results heretofore. Inoculation or active immunization against bacillary dysentery was introduced by Shiga[1] in 1898; he inoculated himself, but concluded that the method would not be generally applicable because of the rather severe local and general reactions, and this conclusion seems to coincide with those reached by others. Shiga, as well as Dopter and others, consequently tried a mixed, active and passive, immunization, using heat-killed bacilli in suspension and mixed with specific immune serum. With this method Shiga (1898-1900) inoculated about 10,000 men in certain parts of Japan where dysentery was epidemic, and while he did not seem to secure any evident protective effect, yet the mortality, which had been 20 per cent. to 30 per cent., was reduced to nearly zero.

Unfortunately the dosage used by Shiga and others in their injections of vaccines and serum is rather indefinite, the bacillary suspension not being standardized, and for this and other reasons, protective inoculation against bacillary dysentery would seem to merit further study by newer and more discriminating methods. It having been found in previous studies[2] that the commonest cause of infantile dysentery as seen in the outpatient department of the Infants' Hospital in Boston is the dysentery bacillus (Flexner type), Lucas and Amos[3] last summer inoculated a series of children living under conditions in which they were likely to acquire infection with dysentery bacilli. They inoculated ninety-five children, all under two years of age, giving one or two injections of 50,000,000 heat-killed bacilli with one cubic centimeter of antidysenteric serum. The exact nature and virtues of this serum they do not state. In no case did the injection do harm, the reactions being mostly mild and brief. Of the ninety-five children, two died of acute infectious diarrhea within a few weeks after the inoculation, while of ninety-seven children observed as controls at the same time, three died of the same cause. The results consequently simply indicate that the inoculation probably did no harm; much more work must be done before we can learn definitely whether the method used by the Boston workers is an effective method for preventing infection with dysentery bacilli in young children. The method might be expected to be effective — unless perchance the dose given of killed bacilli is too large—and possibly the fact that in six of the inoculated children the stools were found to harbor dysentery bacilli while no symptoms of any active infection developed should be regarded as evidence of active protection. Further evidence is needed to establish definite conclusions.

In the case of institutional dysentery it is perhaps easier to obtain conditions that are more favorable for securing decisive results, as shown by the recent work of Dick,[4] who found that the dysentery in the insane asylum and poorhouse of Cook County (Chicago), Illinois, which as a rule flares up each summer, is of bacillary nature, the Shiga bacillus predominating. Apparently the transmission and spread may be attributed to contact and transfer by flies, the infection being maintained from season to season, probably by carriers. On the basis of the results of animal experiments Dick prepared a vaccine of standardized suspension of twenty-four-hour growths of different strains of bacilli, sterilized by heating for an hour and a half at 60 C. At first two doses were given, the first being 10,000,000 bacilli and the second, one week later, 15,000,000. It should be noted that in these experiments comparatively small doses were used. The patients in certain wards were divided so that sixty-two received the injections while the other sixty-two served as controls. Of the latter, four developed dysentery, while of the inoculated, only one developed a dysenteric attack; this attack began on the second day and ran its course in forty-eight hours. There were in some of these cases rather severe local reactions, especially after the second injection, and there occurred a marked rise in specific opsonins and other antibodies. In the second series only one dose of 15,000,000 bacilli was given. This series comprised seventy cases in all; in the control cases three developed dysentery while of the inoculated all remained free. Incidentally it may be noted that Dick also obtained indications that the dysenteric vaccine may be of curative value and that he found the opsonic index to be of greater aid in reaching a diagnosis than the agglutination test. In view of these results it would seem advisable to practice inoculation according to Dick's plan in order to prevent dysentery, especially in institutions in which the opportunities are so favorable for contact infection. It would seem to be indicated also that in the case of children new experiments should be made with small doses.

THE OPIUM PROBLEM, ORIENTAL AND OCCIDENTAL

The announcement by President Taft of the names of the American delegates to the approaching International Opium Conference to be held at the Hague calls attention once more to the opium problem. When the International Opium Conference met at Shanghai in 1909, the American Bishop Brent of the Philippine Islands was made the presiding officer, and Americans were prominent in its organization. After the close of the meeting Dr. Hamilton Wright of Maine, who had been active in its proceedings, was commissioned by our Secretary of State, Mr. Knox, to gather materials for the better knowledge of the situation with respect to the opium and other habit-forming drugs. His investigations have brought to light rather startling facts. The International Opium Conference was originally arranged for in order to prevent the exploitation of the Oriental peoples, and especially to protect the Chinese and the Filipinos from those who are willing to make money out of them by the sale of habit-forming drugs regardless of their evil effects. There is no doubt that the meetings will accomplish much good for these purposes, but just at present the investigations for which they were the incentive, have produced quite another and no less interesting result.

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[1] See his article in Modern Medicine, 1907, ii, 781.

[2] Lucas, W. P., Fitzgerald, J. G., and Schorer, E. H.: Methods of Serum Diagnosis in Bacillary Dysentery (Infectious Diarrhea) in Infants, THE JOURNAL A. M. A., Feb. 5, 1910, p. 441.

[3] Jour. Exper. Med., 1911, xiii, 486.

[4] Jour. Infect. Dis., 1911, viii, 386.

Dr. Wright has found that we in the United States are consuming as large an amount of habit-forming drugs per capita as is consumed in the Chinese Empire. Our consumption of opium is nearly 500,000 pounds, while it is calculated that less than one-seventh that amount would surely suffice for all the medical needs of the people of this country. Besides it is alleged that we are using nearly 200,000 ounces of cocain, although less than one-twelfth of that amount should supply every legitimate medical need. While we are deeply intent on saving the Orientals from exploitation by greedy and conscienceless Occidentals, let us not forget that we have the same problem at home. It has developed within a comparatively short time. It is probable that our overindulgence in opium is at the present time actually doing more harm than the same habit is doing in China, where, as pointed out by Dr. Archdall Reid some time ago, the people are growing accustomed to it and are not so much injured by it as they were at the beginning.

Opium and many other toxic substances seem to follow the same rule as the infectious diseases. When a race has been exposed to the action of such harmful agents for some time, it becomes more or less immune to their effect. This immunity is acquired through the gradual elimination of those whose characters are so weak that they are unable to resist the craving. This is illustrated very well by the fact that the nations that have been longest subjected to the temptations and the dangers of alcoholic liquors are those which now suffer least from them, while nations newly exposed, such as savages, suffer as severely from them as they do from the infectious diseases when newly introduced. This acquired immunity is very costly, however, and is not the ideal mode of protection. It would be much better if we could by moral means lessen the dangers. While we are planning to apply these means to the East, we must remember that charity begins at home and secure their application as far as possible in our own country. For this the first important step is knowledge of conditions as they actually are and that seems to have been brought to us by the recent investigation.

THE PLAGUE

The great epidemic of plague which has been sweeping through a number of the provinces of China has developed a rather curious situation, referred to in this week's letter from our Manila correspondent, which does not augur well for the permanent suppression of the plague in that country, or for the early effective development of a correct public attitude toward epidemic diseases or public sanitary measures.

This epidemic originated in the north, in that part of Manchuria over which Russia and Japan have control. It seems that both of these countries, having in view chiefly commercial and territorial advantage, did not take sufficient precautions to prevent the spread of an outbreak in that section along the lines of their railroads, and last fall the annual migration of coolies to the south carried the plague with it. Thus the great epidemic started.

It is charged that both Russia and Japan should have taken more stringent precautions against allowing this spread of the disease to occur. Japan, by applying her experience in the sanitation of large bodies of troops in the Russo-Japanese War and her recognized efficiency in sanitary matters, should have been able to check the situation in its incipiency. Both of these nations, it would seem, devoted more energy to developing their strategic and military power in the north than to subduing the epidemic, with the result that the plague gained a strong foothold in China.

The Chinese government, however, in pursuance of its recent policy of adoption of western modern methods in government and in all that pertains thereto, on the outbreak of the plague called together a plague commission, similar, perhaps, to other medical commissions of recent times, composed of representatives of the principal governments of the world, for the purpose of studying the plague situation and devising means for its control. Two representatives of the United States government from the medical service in Manila are now in China with a well-equipped laboratory and are studying the plague situation. Already results in its suppression have been accomplished in communities where proper measures could be instituted and carried out. The Chinese government has liberally financed the commission and seems to be in earnest in accomplishing something in the way of eradicating the plague from her dominions.

The attitude of the people in some of the provinces toward the plague and other epidemics—curious enough in Western eyes—is to be reckoned with if wide-spread results in the control of plague and other epidemics are to be attained. Our correspondent relates a conversation with a Chinese acquaintance. In reply to a representation of the necessity of acting quickly in case the disease should appear in the community and of suppressing it at once, the native said that the spread of the plague would be a good thing since it would give better opportunity for the people who remained. He believed that epidemics were necessary from time to time, as otherwise the country would be largely overpopulated, rendering subsistence almost impossible. Our correspondent cites another instance in which the people of a province even rejoiced because a famine had resulted in the death of thousands of people. They pointed to the fact that the province was now prosperous and happy; that the people had plenty of work and plenty to eat.

Though China as a whole is not overpopulated, many provinces under present methods of cultivation of the soil are subject to famine at almost any time and, with the rapid multiplication of the population in the fat years, much of the country might speedily be populated beyond the subsistence line. We of the West cannot learn to recognize the plague as a blessing; but we must recognize that the hard conditions of existence perpetually on the brink of famine complicate immensely the problem of dealing with epidemics.

TO SAVE THE BABIES

The death-rate among infants and young children has been one of the crying disgraces of civilization. Herod's slaughter of the innocents, the story of which has served to horrify the world for twenty centuries, merely hastened the death of many of these babies, as probably the greater part of those whom his ruthless order condemned would have died within a few years from infantile ailments and zymotic diseases. Through the middle ages and up to the present day, the death-rate of infants has had an unknown, but undoubtedly an enormous influence in keeping down the average, while the infant mortality among savages and barbarous nations is too dreadful to contemplate. It has remained for the present generation to realize that "race suicide" as a national peril is not to be compared to "child murder" by removable social and economic causes.

One of the most important problems confronting us is that of child conservation. A movement for the salvation of the child is of far greater importance than the efforts to save our forests, rivers and mineral deposits from spoliation. This is so evident that it is necessary only to demonstrate the facts to secure instant public response. Learning from previous efforts that public education and the arousing of popular interest must precede all attempts to improve conditions, those behind this most important crusade have wisely inaugurated a system of public exhibits in the larger cities.

The Child Welfare Exhibit held in New York was open to the public for a month and was visited by a quarter of a million people, an average of 8,000 per day. The second Child Welfare Exhibit, just held in Chicago, was viewed, during the first ten days in which it was open, by over 265,000 people, or about 26,000 per day. This enormous attendance is attributed by the local papers to the energy of the Chicago managers and to the activity of school teachers and others in spreading the news of the exhibit throughout the entire city. Yet these methods would have been futile had it not been that the public was ready to take an interest in the subject. In no other way is it possible to account for the spontaneous outpouring of people of all classes.

An account of some of the more striking features of the exhibit appeared in The Journal last week. It is difficult, however, to convey an adequate idea of the graphic character of this exposition, while it is impossible for any description to do justice to the crowds of eager people who poured through the Coliseum which contained the exhibit. Mothers from the slums with babies in their arms and with numerous offspring trailing behind, wealthy women of well-known families, eager to acquire information, business men, workingmen, physicians, scientists, politicians, clergymen, trained nurses — all visited the exhibit and all came away impressed with the enormous and unpardonable waste of child life and with the crying need for better methods of prevention. It is impossible to overestimate the value of such educational exhibits. Steps should be taken to render such collections permanent for use in other cities, or at least to utilize some of the valuable material for further education. Since the one educational shortcoming of such an exposition—if the paradox may be pardoned—is that it is too vast and complex to be readily grasped and understood in all its parts, it would be of great value if single features could be placed on display so as to enforce a single lesson at a time. If these special exhibits were shown in much-frequented places, such as public libraries, the waiting-rooms of railway stations and the rest-rooms of department stores, they would be viewed by thousands who never enter a museum or exposition. The presentation of the Child Welfare Exhibit, admirable as it is in itself, should be regarded merely as a starting-point in the education of the public along these lines.

Current Comment

A PRELIMINARY EDUCATION IN PHYSICS, CHEMISTRY, BIOLOGY AND MODERN LANGUAGES

As a part of the education which should be preliminary to the study of medicine, courses in physics, chemistry, biology and modern languages have been especially urged during the last several years by the Council on Medical Education. The importance of the sciences named does not depend so much on the bare knowledge obtained from them as on the training the student receives. In the work in these sciences, and particularly in the laboratory work, the student, under able instructors, acquires the ability to think for himself; he develops the scientific spirit; he learns the use of the microscope and becomes acquainted with the methods and value of experimentation. A reading knowledge of French and German is an invaluable aid to the medical student since it furnishes access to all of the world's recent medical knowledge, a large portion of which appears in the languages named. That is the minimum preliminary education which should be insisted on in this country, not because it is the minimum requirement in every other civilized nation, which is a fact, but because the student really needs that training in order to master the complex courses in the modern medical curriculum and to do his part in solving the intricate problems which now confront the medical world. In the medical course of to-day the ability of the student to think, to observe and to do research work is very essential. This was not so necessary twenty-five or thirty years ago. Experience has shown that the needed qualifications are best developed by thorough courses, under expert teachers, in physics, chemistry, biology and modern languages. These are the reasons for urging those courses as a part of the minimum requirement for admission to medical schools in this country.

NOSTRUM-PROMOTING AS SHORT-STORY MATERIAL

The character and schemes of the patent-medicine faker and the weaknesses of human nature which enable him to take advantage of the public make splendid material for the short-story writer. In a tale of this sort which appeared in the March *Red Book Magazine,* one of a pair of bunco men of the J. Rufus Wallingford type grew a beard, physician style, and acquired a medical vocabulary by reading up in second-hand medical books. Arriving in the town which was to be exploited, he hired the best suite at the hotel and gave out an interview to the local paper which informed the wondering community that "Hank Dusenberry's clay-hole up in the foothills is nearly as good as a diamond-mine. . . . After long and secret experimentation, Dr. Henry Hicks Hudson, the eminent eastern expert, who arrived here yesterday . . . has disclosed to the reporter of the *Weekly Independent* that the discovery of the clay marks one of the epochs in the progress of medical science, second in greatness perhaps only to Koch's discovery of the cholera bacillus. Dr. Hudson's name will rank with those of Lister and Pasteur." The modest scientist reluctantly admitted to the "representatives of the mighty press" that he had used the mud, "which we scientists call Antispasmodyne," with magical results in the most hopeless and stubborn cases of locomotor ataxia, rheumatism, lumbago and even Bright's disease. He also announced his intention of giving to the local merchants the entire lucrative trade of the immense sanitarium which he proposed to erect—on the very reasonable condition, as was soon evident, of their taking stock in the new enterprise. The distinguished scientist's business partner, meanwhile, was recruiting from the cheap lodging-houses of the nearest large city patients, who, by the time they arrived at the sanitarium, had been transformed into millionaires afflicted with sciatica, appendicitis, etc. The "suckers" bit; the stock was sold; but the fake patients struck for more money and made trouble which brought the story to a humorous close. It is worth reading. The magazines seem more willing to print such stories of late, even though there is a possibility that their advertising receipts may be affected. Probably this is because of the fact that the public is becoming interested in the exposures of nostrums and quackery.

MUD THERAPY

By an interesting coincidence, just after the preceding was written, there arrived in the mail a letter originally sent to a physician, reading, in part, as follows:

> The management of the ——— Moor Bath Co., of ———, desires to call the attention of the public at large, and especially those suffering from Rheumatism, Gout, Lumbago, Neuralgia, Kidney and Liver Diseases, Grippe, Nervous Exhaustion, Eczema and Skin Diseases of all kinds, and also those who need rest and quiet, to the cures and beneficial results attained through the use of Moor Baths, such as given by the ——— Moor Bath Co.
>
> We are aware of the fact that the Moor Baths have become famous on account of their pleasing results. We also know that thousands have been cured of Rheumatism and its kindred diseases by the use of Moor Baths after all else had failed them.
>
> The Moor Baths are reconstructive, dissolve and draw all impurities out of the body. Pure air, pure water, pure food and quiet life will do the rest. This natural combination of remedial agents as found at ——— cannot be duplicated elsewhere. ———, one of the foremost health resorts, as such, needs no introduction. Its pleasing climate, beautiful surroundings, its sparkling mineral waters and clean government are known the world over and make it an ideal spot for an institution of this kind.

By the time one has read thus far, one is convinced that there is nothing left to do but to pack up at once and go to the Moor Baths. Reading on, one finds the phrases "most desirable," "one of the grandest views imaginable," "most modern in the world, absolutely fireproof," etc. A remarkable parallel with the plot of the short story referred to in the preceding comment is found in the following paragraph:

> The original discovery of this Moor bed at ——— is due to a prominent doctor, for many years an assistant at the European Moor Baths, who pronounced the same to be of great medicinal value, a claim which has since then been fully substantiated by some of our foremost chemists by careful analyzation.

In making these quotations, of course, we do not intend to suggest that the Moor Baths are not all that they are said to be. By no means. They may be even more wonderful. We merely quote from this letter because it is interesting and instructive.

PROGRESSIVE MEDICAL LEGISLATION

During the session of legislative activity now nearly over, much has been accomplished for medical education. Not only has legislation establishing higher standards of preliminary education and providing increased appropriations for medical education been adopted, but also legislation tending to lower educational standards, in at least one instance, has been defeated. In Utah and in North Dakota amendments to the practice act have just been secured, providing respectively for one and two years in a college of liberal arts, or its equivalent, in addition to a standard four-year high-school education as their minimum requirement of preliminary education, making nine states which now have adopted these higher standards. In Minnesota, on the other hand, legislation which would have lowered the excellent standard fixed by the licensing board of that state encountered signal defeat. Reports also have been received of the defeat of other vicious legislation such as bills providing for separate boards and special standards for osteopaths, chiropractics and optometrists. These results are most encouraging and are a sure indication that more reasonable standards of medical education are to be generally adopted in the near future. The facts that the legislatures of Alabama and Nebraska each appropriated $100,000 for the development of their state university medical schools and that North Carolina and Oregon appropriated respectively $40,000 and $30,000 for a similar purpose, constitute an assurance that our state legislatures are going to assume a larger share of the responsibility of providing a suitable training for those who are to care for the sick and injured.

THE EDUCATIONAL FUNCTION OF HOSPITALS

Many of those who are in control of our large hospitals do not seem to have realized that, to do the most good in any community, a hospital should exercise a dual function. First, it should take the best possible care of the patients who come under its roof and, second, it should act as an educational agency, by which doctors, students, interns and research workers are made more familiar with the nature and symptoms of diseases, the methods of diagnosis and the means of preventing or curing them; by which nurses are educated in the latest routine care of the sick, and by which the patients themselves and indirectly the general public are led to recognize the importance of dieting, rest and quiet, and the value of aseptic or antiseptic methods and the other practices of the hospital routine. The patient undoubtedly receives a better treatment in a hospital where the attending staff is composed of physicians acquainted with the latest and best methods of diagnosis and treatment; and this is more apt to be the case in the hospital in which teaching and research are being done. The same is true to a certain extent where interns and nurses are in attendance. It is doubtless a fact that the two chief functions of a hospital are interdependent, and that each is best performed only where both functions are fulfilled. It is to be hoped, therefore, that a careful reading of the important article on this subject in this week's issue, by Dr. James B. Herrick, will convince those who are in control of our large hospitals of the increased usefulness which those institutions can render the community if they are fully exercising their educational function.

S. WEIR MITCHELL

There are comparatively few literary records comparable to that of Dr. S. Weir Mitchell, who, now in his eighty-third year, has just published his latest novel, "John Sherwood, Ironmaster," which shows no falling off in his power of writing and of holding his reader. When it is remembered that he has been easily among the first of American neurologists in a specialty which is more comprehensive perhaps than any other and requires immense professional industry of the man who maintains himself in it as Dr. Mitchell has done, his literary ability and activity are notable phenomena. He is probably one of the oldest, if not the oldest, of living productive literary men; and this fact, to say nothing of the professional activities he may still keep up, makes his latest achievement the more remarkable. Everything he does is done well.

A GOOD DOCTOR

Statements are commonly heard that the function of a medical school is "to make good doctors," or to produce "well-trained practitioners"; or other general expressions have been used which have still left it with the hearer to form his own conception of what was meant by the expressions used. The article by Dr. E. P. Lyon which appears in this issue of The Journal, however, sets forth so clearly and logically the essential qualifications of "the good physician," as to leave the reader no possible ground for misunderstanding. Dr. Lyon shows that the "good physician" must have accurate powers of observation, must "mix his seeing with brains," must know how to conduct experiments, must be able to form accurate conclusions and must be a man of character. The article explains also what the medical school must have in the way of courses, equipment and teachers in order to develop these qualities in its students. Furthermore, this paper clearly demonstrates why higher entrance standards are needed; why it is essential for a college to have full-time, expert teachers; why well-equipped laboratories should be provided and why some research is valuable in the undergraduate course of the medical school. In short, the article shows that the medical course to-day should be in accord with the abundance of known facts in modern medicine.

Medical News

CALIFORNIA

Change in Meeting Place.—The Los Angeles County Medical Association now meets in the cafeteria rooms on the fourth floor of the Hamburger Building.

Personal.—Dr. and Mrs. J. Edson Kelsey and family, Berkeley, sailed for the Orient, May 24.—Dr. Ernest B. Hoag, for two years medical director of the Berkeley schools, has resigned, to take effect at the end of the school year.——Dr. Charles Hamilton English, San Francisco, who was stricken with cerebral hemorrhage, May 8, is reported to be improving.

ILLINOIS

Personal.—Dr. Henry T. Godfrey, Galena, has announced his approaching retirement from practice.——Dr. George H. Hunt, Paris, was painfully injured in an automobile accident in Chicago, May 18.

Result of Intern Examination.—Of the 145 who took the recent examination for positions as interns in the Cook County Institutions, a woman graduate of Rush Medical College is said to have obtained the highest standing, 93.40 per cent. Of the 40 who received appointments, 15 were graduates of Northwestern University Medical School, 10 each of Rush Medical College and the College of Physicians and Surgeons, 4 of Loyola University, and 1 was an aluminus of the Chicago College of Medicine.

State Society Election.—At the sixty-first annual meeting of the Illinois State Medical Society, in Aurora, May 16-18, these officers were elected: president, Dr. L. H. A. Nickerson, Quincy; vice-presidents, Drs. J. W. MacDonald, Aurora, and J. E. Miller, Danville; secretary, Dr. Edmund W. Weis, Ottawa (reelected); treasurer, Dr. Everett J. Brown, Decatur (reelected); councilors, Drs. Jeremiah H. Stealy, Freeport; James W. Pettit, Ottawa, and Elmer B. Cooley, Danville; delegates to the American Medical Association, Dr. Alexander H. Ferguson and Hugh T. Patrick, Chicago, and Everett J. Brown, Decatur, and alternates, Drs. Clifford U. Collins, Peoria; Samuel C. Stremmel, Macomb, and George S. Rainey, Salem. Springfield was selected as the place of meeting for 1912, and a resolution was adopted asking the state legislature to make a fixed annual appropriation of $100,000 for the maintenance of the medical department of the state university.

Chicago

Small-Pox in Hospital.—Three cases of small-pox, in an intern, a nurse and a patient, respectively, have been discovered in St. Bernard's Hospital, and the patients have been removed to the Isolation Hospital. All the inmates, physicians, nurses and help at the hospital have been vaccinated.

Annual Meeting of Pathologic Society.—The annual meeting of the Chicago Pathologic Society was held May 8 and the following officers were elected: president, Dr. Alice Hamilton; vice-president, Dr. Edward C. Rosenow; secretary, Dr. George H. Weaver (reelected); treasurer, Dr. Alexander A. Goldsmith; censors, Drs. Emil Ries, H. Gideon Wells and Lorenzo N. Grosvenor, and publication committee, Drs. Ludvig Hektoen, F. Robert Zeit and H. Gideon Wells.

Personal.—Dr. William A. Evans, health commissioner, retired May 20 and Dr. Gottfried Koehler, assistant commissioner of health, has been placed in temporary charge of the health department.——Dr. Joseph E. Raycroft has accepted the professorship of physical education at Princeton University.——Dr. B. Brindley Eads was seriously injured in a collision between his automobile and a street car, May 18.——Dr. B. Barker Beeson sailed from New York for London, May 20.

INDIANA

District Meeting.—The Ninth Councilor District Society held its annual meeting in Kokomo, May 19. The following officers were elected: president, Dr. Edgar Cox, Kokomo; vice-presidents, Drs. Wm. J. Fernald, Frankfort, and Kenton C. Hershey, Carmel; secretary and treasurer, Dr. Paul J. Barcus, Crawfordsville, and assistant secretary, Dr. George T. Williams, Crawfordsville.

Personal.—Dr. Geo. W. Miller, Covington, has been admitted to the practice of law in the state of Indiana. He does not intend to give up the practice of medicine at present, but eventually intends to take up legal medicine as a specialty.——Dr. William H. Johnson, a member of the city council of Indianapolis, who has been seriously ill at his home, is reported to be improving.——Dr. Eric A. Crull has resigned as president of the Fort Wayne Antituberculosis Society.

Hospital News.—A new free colored hospital will be opened in Indianapolis, June 1. At the eighth annual convention of the State Sisters of Charity (colored), which met in Indianapolis, May 15 and 16, $500 was subscribed toward the hospital fund.——A contract for the new addition to the Methodist Episcopal Hospital, Indianapolis, has been let for $67,676. The total cost will approximate $125,000. During the past week more than $80,000 has been subscribed in Indianapolis for this institution.

IOWA

Medical Women Elect Officers.—At the annual meeting of the Iowa Society of Medical Women in Des Moines, May 17, the following officers were elected: president, Dr. Jennie G. Ghrist, Ames; vice-presidents, Drs. Georgia Stewart, Des Moines, and Jessie B. Hudson, Iowa City; secretary, Dr. Lena A. Beach, Cherokee, and treasurer, Dr. Grace Jerger, Waterloo.

Personal.—Dr. George E. Decker, Davenport, has resigned as a member of the State Board of Health, giving as his reason "the inadequate appropriations made by the state for the work of the board" and "the ill-advised and carelessly drawn, if not absolutely vicious, health legislation of the last two general assemblies."——Dr. Albert C. Moerke, Burlington, president of the State Board of Health, has resigned, giving as his reason the failure of the recent legislature to provide a sufficient appropriation for carrying on the work of the board.——Dr. Gardner A. Huntoon, Des Moines, has been appointed a member of the State Board of Health, vice Dr. Alfred P. Hanchett, Council Bluffs, term expired.

KANSAS

State Society Meeting.—The forty-ninth annual meeting of the Kansas Medical Society was held in Kansas City, May 3-5. The following officers were elected: president, Dr. John T. Axtell, Newton; vice-presidents, Drs. George M. Gray, Kansas City; Horace G. Welch, Hutchinson, and Anderson Lincoln, Kansas City; secretary, Dr. Charles S. Huffman, Columbus, and treasurer, Dr. Lewis H. Munn, Topeka.

Personal.—Dr. Andrew H. Fabrique, Wichita, was made a life member of the Sedgwick County Medical Society at its meeting, April 11.——Dr. Francis H. Slack of the University of Kansas, Lawrence, formerly director of the Boston Bacteriologic Laboratory, has been offered the secretaryship of the Boston Board of Health.——Dr. Louis O. Nordstrom, Salina, has been elected president, and Dr. J. Albert Fulton, Kansas City, secretary and treasurer of the Alumni Association of the Medical Department of the Kansas State University.

MARYLAND

Personal.—Dr. Luther H. Keller, Hagerstown, has been elected vice-president of the Washington County Confederate Memorial Association.——Dr. Thomas C. Bussey, Texas, is reported to be seriously ill as the result of cerebral hemorrhage.——Dr. Lewis K. Woodward has been elected a member of the common council and treasurer of Westminster.——Dr. Frederick W. Steiner has been elected a member of the Board of Health of Havre-de-Grace.

Baltimore

Scotch Gynecologists in Baltimore.—Dr. Munro Kerr of the University of Glasgow was the guest of Dr. Howard A. Kelly last week. He was entertained by Dr. Kelly at a dinner at the Maryland Club.

Commencements.—The commencement exercises of the various medical colleges in Baltimore will be held as follows: University of Maryland and Baltimore Medical College, June 1; College of Physicians and Surgeons, June 6, and Johns Hopkins University, June 13.

Bust to be Unveiled.—At the commencement exercises of the University of Maryland, a bronze bust of the late Dr. James Harris, founder of the department of dentistry, and given to the university by the senior dental class, will be unveiled. The presentation will be made by Prof. John C. Hemmeter and a brief address will follow by Professor Heatwole.

Personal.—Dr. Robert L. Mitchell is reported to be ill with scarlet fever at Sydenham Hospital.——Dr. Delano Fitzgerald has returned home after six months in Egypt.——Dr. Duncan McCalman was thrown from his automobile recently, fracturing his clavicle.——Dr. John C. Hemmeter has been detailed to do original investigation for the government at the marine biologic laboratory, Wood's Hole, Mass.

MASSACHUSETTS

Sanitarian Appointed Professor.—George Chandler Whipple, New York City, of wide repute as a lecturer and author on technical subjects, has accepted an appointment as professor of sanitary engineering at Harvard University and will begin his duties with the coming academic year.

Personal.—Dr. Herbert G. Leslie has been elected school physician of Amesbury.——Dr. Edward J. Brearton has been appointed assistant examining physician in the department of public works of Dorchester.——Dr. William J. Teahan has been appointed medical examiner for Holyoke, vice Dr. Frank Holyoke, retired.

State Society to Meet.—The Massachusetts Medical Society will hold its one hundred and thirtieth anniversary meeting June 13-14, under the presidency of Dr. George B. Shattuck, Boston, at Harvard Medical School. The Shattuck lecture will be given on the evening of June 13 in the Boston Medical Library by Dr. Richard C. Cabot, Boston, on "Observations Regarding the Relative Frequency of the Different Diseases Prevalent in Boston and Vicinity."

MISSOURI

State Medical Association Meeting.—At the annual meeting of the Missouri State Medical Association, held in Kansas City, May 16-18, Sedalia was selected as the next place of meeting. The following officers were elected: president, Dr. Robert H. Goodier, Hannibal; vice-presidents, Dr. Wilson J. Ferguson, Sedalia; J. Henry Amerland, St. Louis; Charles H. Lester, Kansas City; George W. Vinyard, Jackson, and John M. Stone, Laredo; secretary, Dr. Edward J. Goodwin, St. Louis (reelected), and treasurer, Dr. J. Franklin Welch, Salisbury.

MONTANA

Tuberculosis Exhibit Opens.—The exposition under the auspices of the National Association for the Study and Prevention of Tuberculosis opened in Butte, May 9. Dr. Isadore D. Freund presided at the opening meeting.

Red Cross Society Formed.—The Montana State Board of the American Red Cross has been organized with Governor Norris as president. The board will serve as a standing committee on finance for the Red Cross and will receive contributions for relief purposes.

County Society Meetings.—The annual meeting of the Lewis and Clark County Medical Association was held in Helena, April 27. Dr. Maria M. Dean was elected president; Dr. Sidney A. Cooney, vice-president; Dr. Barnard V. McCabe, secretary; Dr. George W. King, treasurer, and Dr. Ben C. Brooke, delegate to the state association, all of Helena.——Fergus County Medical Association, at its annual meeting held in Lewistown, elected the following officers: president, Dr. Charles C. Wallin, Lewistown; vice-presidents, Drs. C. E. Hagen, Hedgesville, and Arthur E. Myrick, Stanford; secretary and treasurer, Dr. John T. Foley, Lewistown; delegates to the state association, Drs. Abraham Poska, Philbrook, and Willard A. Long, Lewistown, and alternates, Drs. C. E. Hagen, Hedgesville, and S. Sheridan Owen, Moore.

NEW JERSEY

Readjustment of Medical Staff.—An entire change in the classification of assistant physicians at the New Jersey State Hospital for the Insane, Morris Plains, is to be made to go into effect June 1. The medical staff was formerly composed of the medical director and a staff known as first to sixth assistant physicians. Under the new classification the medical director will be chief of staff as before, Dr. Britten B. Evans, Morris Plains. Drs. E. Moore Fisher, Morris Plains, and Louis K. Henschel, N. Y. City, will be known as senior assistants and the remaining three members of the staff, Drs. George A. Anderson, Marcus A. Curry and George B. Hampton, are to be known as junior assistants. Three more junior assistants are required on the medical staff and a competitive examination is to be held June 1 to determine the names to be submitted to the board of managers at its next meeting.

NEW YORK

Tuberculosis Commission Bill.—The assembly has passed the Goodwin Bill creating a commission to consist of three members to be appointed by the governor of the state, the State Commissioner of Health, a physician, a state senator and three assemblymen, to investigate generally the prevalence of tuberculosis in the state with special reference to methods of prevention.

Cancer Hospital Assured.—Governor Dix has signed the bill appropriating $65,000 to establish in Buffalo a hospital to investigate the cause, nature, treatment, prevention and cure of cancer and allied diseases. The management is to be by a board of seven trustees, including the state commissioner of health, Drs. Roswell Park, Charles Cary and William H. Gratwick, Buffalo; Frederick C. Stevens, Attica; John G. Milburn and Charles S. Fairchilds, New York City.

Personal.—Dr. Elbert M. Somers of the St. Lawrence State Hospital, Ogdensburg, has been appointed by the State Lunacy Commission as medical inspector for the commission to succeed Dr. Robert Doran who was recently appointed superintendent of the Long Island State Hospital.——Dr. Julius A. Klaks, Buffalo, has been elected health-officer of Depew.——Dr. Nathan William Soble, Rochester, chairman of the tuberculosis committee of the public health association of Rochester, has been elected vice-president.

Urge Further Antituberculosis War.—Joseph H. Choate in a letter to the State Charities Aid Association declares that the "no uncared for tuberculosis in 1915" movement will be accomplished if the present rate of progress is maintained. The number of county hospitals authorized to do this work has increased during the past year from eight to sixteen, of dispensaries from fifteen to twenty-five, of visiting nurses from thirty-two to thirty-nine and of localities providing special relief from eight to fifteen. The letter has been sent to 1,500 officers of antituberculosis committees and calls on them to prosecute the work with vigor in the assurance of success in view of the progress already made.

New York City

Sanitary Object Lessons.—A department of public health has been established in connection with the American Museum of Natural History. The formal inauguration of this new feature of public education took place, May 22.

For Conservation of Vision.—The American Association for the Conservation of Vision has received a certificate of incorporation from the Supreme Court. This association proposes to investigate all the conditions and causes which result in blindness and impaired vision, the relation of impaired vision to general health and the means of prevention of blindness.

Personal.—Dr. and Mrs. Leonard Weber sailed for Europe, May 13.——Dr. Justin Herold was operated on, May 5, and is progressing satisfactorily.——Dr. Minas S. Gregory fell down-stairs in Bellevue Hospital on May 16, injuring his spine and breaking two ribs.——Dr. Edward Quintard has received a bequest of $5,000 under the will of the late John Henry Flagg in recognition of his "skilful and untiring services" to the deceased.——Dr. Aurelio A. Dubari has returned from Europe.

NORTH CAROLINA

News Notes of Hospitals.—An anonymous donor has presented Rex Hospital, Raleigh, with an *x*-ray outfit valued at $1,500.——The new City Hospital at Goldsboro is nearly completed.——Drs. John L., Benjamin F. and Robert C. McMillan have opened the McMillan Hospital at Red Springs.——Dr. Frank T. Merriwether, Asheville, tendered the members of the Buncombe County Medical Society a reception at the opening of the new operating rooms recently added to the Merriwether Hospital.

Health Officers Appointed.—Dr. James P. Battle, Nashville, has been elected health officer and quarantine officer of Nash County.——Dr. John Bynum, Winston-Salem, has been elected superintendent of health of Forsyth County.——Dr. Edwin M. Brown, Washington, has succeeded Dr. Plummer A. Nicholson as superintendent of Beaufort County Board of Health.——Dr. Marvin L. Smoot, Salisbury, has been elected superintendent of health and quarantine for Rowan County.——Dr. Henry D. Stewart, Monroe, has been reelected superintendent of health of Union County.——Dr. R. Morrison King, Concord, has been elected health officer of Cabarrus County.——Dr. James M. Covington, Jr., Wadesboro, has been appointed quarantine officer for Anson County.

PENNSYLVANIA

Appropriation for State Charitable Institutions.—The state, semi-state and charitable institutions of Pennsylvania appealed to the legislature for appropriations amounting to nearly $115,000,000, but the bill passed by the house committee carried an appropriation of less than one-fourth of that amount, or about $26,000,000.

Results of Free Antitoxin.—A remarkable saving of child life is shown by the latest figures tabulated by State Health Commissioner Dixon as to the free distribution of diphtheria antitoxin among the poor. A year ago he decided to distribute and urge the use of 5,000-unit initial doses of antitoxin. The death-rate at that time among the little children of the poor stricken with diphtheria and who were being treated with 3,000-unit doses of antitoxin was about 8 per cent. That meant a most gratifying saving of life for instead of 42 per cent. of death as is the case in diphtheria without the use of antitoxin, it meant that only 8 per cent. proved fatal. But now out of 1,225 cases of diphtheria treated with the 5,000-unit doses distributed by the State Health Department, there were only eighty-one deaths, or 6.61 per cent., the lowest death-rate in the record of the department's work.

Philadelphia

Willard Memorial Service.—Services in memory of Dr. De Forrest Willard, who occupied the chair of orthopedics in the University of Pennsylvania, were held at the Second Presbyterian Church on May 8, members of the medical profession and university students participating.

Addition to Woman's Hospital.—The Woman's Hospital of Philadelphia, is now celebrating its fiftieth anniversary by placing a roof garden on the building. This will contain public and private wards, with sun parlor, sheltered walk, diet kitchen and a fire tower. The partitions will all be of glass.

Steamer Detained at Quarantine.—The Italian steamer *Verona* from Genoa for Philadelphia, via New York, was detained several hours at the state quarantine, Marcus Hook, May 10, on account of the discovery of a suspicious rash on two children of the steerage. After observation, it was reported that the children were suffering from chicken-pox and the steamer was released.

Personal.—Dr. Allen J. Smith, dean of the medical school of the University of Pennsylvania, has been appointed professor of pathology, vice Dr. Richard M. Pearce, who will take the chair of research medicine.——Dr. Wendell Reber has been appointed visiting ophthalmologist to the Philadelphia General Hospital, vice Dr. Charles A. Oliver, deceased.——Dr. H.

Maxwell Langdon has been appointed one of the chiefs of the eye dispensary of the Presbyterian Hospital.

Eligible List for Blockley.—Of the 143 young physicians examined by the Civil Service Commission for the 28 positions as interns in the Philadelphia General Hospital, only 3 failed to obtain the required average of 70 per cent. The general average obtained by the successful applicants was 80.6 per cent. Of those who successfully passed the examination, 73 are graduates of Jefferson Medical College; 29 of the Medico-Chirurgical College, 28 of the University of Pennsylvania, 9 of Temple University and 4 of the Woman's Medical College.

Milk Show Opens.—The first Philadelphia Milk Show opened May 20, at 10 o'clock; about 700 people visited the rooms before noon. The thing that most pleased the sanitation and health experts was the keen interest exhibited by all and the careful attention given to the impromptu lectures on the various exhibits. At 12:20, Dr. H. Brooks Mills, by means of motion pictures, demonstrated in the lecture hall, adjoining the exhibition rooms, the evils of the ordinary housefly. At 3 p. m., the mayor delivered the address of welcome and addresses were made by Dr. Joseph S. Neff, director of public health and charities; Dr. Samuel McC. Hamil, chairman of the Philadelphia Pediatric Society Milk Commission, and Dr. Charles J. Hatfield, vice-chairman of the executive committee of the milk show presided. In the evening, addresses were made by Drs. Lawrence F. Flick, Randle C. Rosenberger and John C. Gittings. The show was open all the following week and a feature of Monday, May 22, was that all lectures and demonstrations were given in Yiddish.

Open-Air School Opens.—The open-air school for tuberculous children on the roof of the College Settlement Building was opened May 16. It is conducted under the auspices of the Board of Public Education, the Phipps Institute and the College Settlement. The Phipps Institute supplies the management of the school, the nurse and the food; the Board of Education furnishes the teacher, text-books, desks and the pupils, who are transferred from various schools, and the College Settlement gives the use of the roof, shelter, playgrounds, bathing and cooking facilities. The class is to be made up of twenty pupils, gathered from schools in walking distance from the College Settlement and will continue through the summer. Ten pupils reported the first day and were each given a tooth brush, tooth powder, mouth wash, wash rag, brush and comb and nail brush and instruction in the use of these articles was the first lesson given. The school will open at 8 o'clock each morning, which is the hour for the bath. At 8:30, breakfast is served and at 9, lessons begin in the open air and continue until 10:30. From 10:30 to 11, there will be games, followed by a wash and rest until noon when a hot dinner will be served in the dining room of the Settlement Building. From 1 to 3, complete relaxation and rest, the children lying extended; from 3 to 4:30 lessons and games and then rest until 5:30, when the children are sent home after indulging in a good wash. Dr. Frank Craig is in direct charge of the work. The Phipps Institute plans to erect a large new school at Seventh and Lombard Streets, to which on completion, this class will be moved and as many more like it established as funds will permit.

GENERAL

Clinical Investigators Elect.—At the annual meeting of the American Society for Advancement of Clinical Investigation, held in Atlantic City, May 8, Dr. Theodore C. Janeway, New York City, was elected president; Dr. Joseph Sailer, Philadelphia, vice-president; Dr. Wilder Tileston, New Haven, Conn., secretary, and Dr. George Blumer, New Haven, Conn., treasurer.

Therapeutic Society Meets.—At the twelfth annual meeting of the American Therapeutic Society, held in Boston, May 13, the following officers were elected: president, Dr. Alexander D. Blackader, Montreal, Que.; vice-presidents, Drs. Howard Van Rensselaer, Albany, N. Y.; Robert T. Morris, New York City, and Clarence J. Blake, Boston; secretary, Dr. Noble P. Barnes, Washington, D. C., and treasurer, Dr. A. Ernest Gallant, New York City.

The Care of Epileptics.—The National Association for the Study of Epilepsy and Care and Treatment of Epileptics will hold its tenth annual meeting in St. Louis, June 16, under the auspices of the St. Louis Medical Society. The date set for this meeting will allow the members to attend the meeting of the American Medico-Psychological Society in Denver and will not interfere with their attendance at the American Medical Association at Los Angeles.

Medical Library Association Meeting.—The fourteenth annual meeting of the Medical Library Association was held May 9-10 in Atlantic City. On the first day the president's address was delivered by Dr. John H. Musser, Philadelphia, and papers were read on "Hospital Records in Relation to the Hospital Library," by Mrs. Grace W. Myers, Boston; on the "Establishment of Medical Libraries in County Medical Societies," by Dr. Carl Black, Jacksonville, Ill., and on "The Changes in Medical Periodical Literature Since January, 1909," by C. Perry Fisher, Baltimore.

Warning Concerning Subscription Company.—Correspondents at various points in the northwest write that they paid subscriptions to The Journal to "A. S. Brown," who claimed to represent the Seattle Subscription Company, of Seattle, Wash. These letters have come from Montana, Dakota and Oregon. One physician writes:

> "A short time ago I was 'stung' by a medical magazine canvasser. . . . He was a well-dressed young fellow . . . offered any of the medical magazines at a reduction in the regular cost. . . . I had been intending to subscribe for . . . and I gave him an order and paid $4.20 (regular price $5.00). He had a small, black, leather-covered handbook that was pretty well worn and contained a list of all medical magazines, the regular price of each, the price this company was making and the price he would make if more than one was taken."

The Journal has repeatedly called attention to the danger of paying money to unknown persons. The more flattering the offer the more suspicious one should be. In this instance, it seems that there is no such concern as the Seattle Subscription Company; at least several of those who have written say that the postoffice returned their letters with the information that this company could not be found.

The Plague.—The international plague conference which met last month at Mukden apparently did not accomplish much; but it was an epoch-marking event in that it showed how China has cast off its ancient medicine and turned to the West for aid in warding off the threatened epidemic. This conference and also the general subject of plague are discussed by our Manila correspondent in this issue. The disease seems to have been stamped out in Manchuria, after causing 31,450 deaths according to the official records, and it has subsided in northern China, but our British exchanges state that in India there were 166,135 deaths from the plague during March, a total of 332,554 during the first three months of the year. March and April have shown the maximal mortality each year during the present siege of plague in India. Egypt still has a few scattered cases of the plague as also the western South American countries and southern Russia.

MANILA LETTER

(From Our Regular Correspondent)

Manila, April 4, 1911.

The Alleged Economic Value of Plague and Other Scourges

Some weeks ago I reported to The Journal some phases of the plague situation and scare in Shanghai, China. After many deaths among the Chinese and several among the Europeans, the pestilence seems to have been got rid of. Among the results other than the loss of life, are to be counted more or less political wrangle and a furtherance of sanitary measures and of medical education in this part of China. The medical missionaries, the few hospitals and the Chinese may be said to be cooperating more closely, and a new medical school, based on Western principles, is almost in view. Before the Shanghai pestilence was eradicated, another more serious epidemic of plague broke out in Manchuria. The epidemic in Manchuria has been decidedly more extensive and severe, and conditions at times have been alarming. The cities of Mukden and Harbin have been the principal sufferers. The reported conditions at Mukden remind one of the great plague year in London, so well described by DeFoe. At one time the spread of the disease was becoming so extensive that the foreign legations at Peking threatened to be abandoned entirely. It is interesting to note that the spread of the contagion was limited almost entirely to the regions supplied by the railroads, and Russia and Japan have been severely criticized in this regard.

The Manchurian epidemic of plague is not the bubonic form which is so prevalent in southern China and India. It is the so-called pneumonic plague, the etiology and distributing agent of which is practically unknown. It is interesting and gratifying to note with what promptness and foresight the Chinese government has risen to the occasion and is attempting the eradication of the epidemic. Aside from strict quarantine measures, the government has asked all the great powers to send delegates to an international plague commission for the study and prevention of this particular plague. The Chinese themselves are supplying ample funds for the commission and are placing every facility at their disposal.

Dr. Richard Pearson Strong, chief of the Biological Laboratory, Bureau of Science, Manila, and Dr. Oscar Teague of the same laboratory are representing the United States government on the commission. They left for Manchuria in February and took with them a large supply of laboratory apparatus and chemicals. We have as yet no report of their work, further than that they have their laboratory established and are finding conditions fairly favorable for investigation.

As is usually the case when there is any extensive disturbance in China, the foreign nations are accused (and perhaps rightly so in the majority of cases) of using it each to further individual ends, so Russia and Japan each and jointly have been facing serious indictments during the present epidemic. At any rate Russia seems unduly active on the western frontier and Japan, although the Mikado is reported to have given a half million yen ($250,000) toward the eradication of the plague, seems to have urgent need for an increase in her military strength on the Korean border and in Manchuria. Some of the Japanese papers which are supposed to reflect much of the sentiment of the government are maintaining that it is time for Japan to take the plague situation in hand. The following regarding the plague situation in Manchuria forms part of the report of an inquiry made by the *National Review* of Shanghai: "Other features of the situation are commented on in the same interviews, and we gather that Japan, in spite of her vaunted medical advances and her superior civilization, is in very large measure responsible for the spread of the pestilence to the south. In November and December the railway authorities knew that there was plague in the north, and they also knew that with the approach of Chinese New Year thousands of coolies would be returning to their homes. They would very probably carry the plague with them, but in spite of this knowledge the railways carried trainload on trainload of these coolies. Then one day two deaths took place among the coolies who were traveling from Mukden to Shanhaikwan on the Chinese railroad. Plague was discovered and the whole trainload was sent back to Mukden. Only then did the other railroads take steps which should have been taken months before and which would have prevented the spread of the disease to China proper. This, dear readers, is Russo-Japanese efficiency, of which we have further examples reported from Mukden and Harbin by the Peking *Daily News*, in which a telegram states that these two governments are putting hindrances in the way of the Chinese authorities in their battle with the plague. Hence the responsibility for the spread of the disease from the area in which it originally occurred rests almost entirely with the Russo-Japanese agreement. Responsibilities generally carry with them opportunities, and so on the present occasion we learn that the two powers are strengthening their forces in Manchuria.

"It is pleasant to turn from this side of the question to what the Chinese government is doing. The cooperation of foreigners is everywhere being sought; funds are being provided without stint, as in Harbin, where the Manchurian viceroy has appropriated 150,000 taels for the work of prevention; there is ready acquiescence in the proposals of competent medical men in every one of the large centers where the pest is being fought; the Chinese government is sending its available men from every quarter; the senior students of the medical schools in Peking are being drafted to the work for inspection purposes; materials and prophylactics are being hurried from Europe; and, generally, it may be said that every effort of which any government under the circumstances would be capable is being put forth by the Chinese government. Observers on the spot testify to these things universally, and the result is that during the last two or three days the news from every point has been more satisfactory. The actual number of cases is less, the fatalities are fewer, the arrangements are being rapidly perfected, and if the present resistance to the spread of the epidemic can be maintained there is some hope of seeing its extinction at a not distant date. The strict quarantine that is being enforced at all ports regarding vessels from the infected area may cause temporary inconvenience, but it will undoubtedly prove an effective barrier to the further march of the pestilence, and the fact that there has been a fall of two feet of snow will naturally impede travel on foot and thus hinder the spread of the disease."

BLESSED BE THE PLAGUE!

The foregoing cannot, however, be taken to reflect the attitude of more than the Chinese government, and a limited number of the more highly educated (as viewed by western standards). The average Chinaman more probably holds views more like this. I was talking recently with a native friend about the possibility of Hankow's receiving a visit from the plague scourge. Being anxious to impress him with a sense of the gravity of the situation, I laid on the color with a big brush. "Supposing," I said, "just one man were to arrive here with the seeds of the disease and were to take up his abode in one of the crowded inns, it is so contagious that probably all the people in the inn would get infected, and every one of them would ultimately die. Before that, most of them would have gone away, as it takes from three to five days from the infection till the sickness sets in, and wherever they went they would infect others in the same way, till the people would soon be dying in hundreds and thousands. If it started among the poor people in the mat huts, it would simply clean them out. Sometimes whole regions are depopulated. Once, twenty years ago, on the Canton border in south Huan, we went through a district where, for a whole day's journey, there was not an inhabitant left. Some kind of plague had killed most of them and the rest had run away. The houses were well built and the fields were fertile, but except a few dogs there was no one about, and whoever wished was quite welcome to take possession."

At this point my native friend broke in with his views. To my amazement he declared that that was splendid, and just the very thing which Hupeh wanted. He said that there were far too many people in the province, and that there were not fields enough for all of them to till, nor rice enough to fill their mouths. Every year they were increasing, as all the young people married and had big families. Because of this China was weak. If you put too many goldfish in the globe they will die, and if you sow your vegetables and flowers too thick they will not come to anything. It was just the same with people. And unless something happened to reduce their numbers they would be in time compelled to eat each other, which would be a worse state of affairs than the plague. What answer to make to this I did not know, and do not know yet.

A friend of mine was recently traveling through the districts in Kiangsu where the famine raged so frightfully in 1907, and he was similarly nonplussed when he found the people everywhere speaking of the famine as a great blessing, because ever since then there had been food and to spare for all, and plenty of work for those who wished to labor. The question of the rapid multiplication of Oriental people, in connection with the present advance of Christianity and civilization, is one which in a few generations will become serious. It is estimated that, given peaceful times and prosperous years, the population of this empire could be doubled in a generation. There are 400,000,000 now. Supposing that, by the end of a century, this number is doubled three times, we then arrive at the appalling total of 3,200,000,000 of people. Hitherto the increase has been held in check by the constantly recurring calamities of war, famine and pestilence. It is estimated that the Taiping, the Yunnan and the Kansuh Muhamadan rebellions resulted in the destruction of fifty millions of lives. The Shansi and Shantung famine of 1878 is said to have swept away from nine and a half to thirteen millions. This is within comparatively recent times, and never a year passes without similar disasters on a smaller scale. But we are looking forward to a period when, through the increase in knowledge, the prevalence of higher principles, and the advance in the organization the above-mentioned trinity of evil will be shorn of its strength; and what then? The answer is not easy. Meanwhile it may be asserted that China as a whole is not overpopulated. Science may yet teach us how to increase vastly the fruitfulness of the earth. Our hope is that the same advance in knowledge and better principles which create the difficulty will also provide the cure.

LONDON LETTER

(*From Our Regular Correspondent*)

London, May 12, 1911.

Inspection of the Stomach

At the Royal Society of Medicine Dr. William Hill, laryngologist, and Dr. Herschell, gastrologist, demonstrated a new form of gastroscope. The principle is to pass under cocain anesthesia an open endoscope of Killian's pattern through the mouth, pharynx and esophagus, under direct vision throughout, into the stomach. A cap with a tap for inflation at its side and a round aperture in its upper surface is then attached by means of a bayonet joint to the proximal extremity of the tube. Through the round aperture, which has a rubber lining, an indirect periscopic tube, which accurately fits the aperture, with a terminal lamp on the cystoscopic principle, is passed into the stomach through the lumen of the direct vision outer tube. Inflation is commenced before the inner optical tube reaches the stomach. The upper part of the pyloric antrum, the pyloric orifice, and the adjacent portion of the lesser curvature, all in the field at the same time, were shown to the members of the society. Examination of the cardiac orifice is best done with the outer inflating portion of the apparatus, which has a plane glass window at the proximal end to prevent the escape of air when inflating. The rest of the stomach, especially the pyloric vestibule and lesser curvature, the most frequent sites of election of morbid lesions, are more efficiently examined on the cystoscopic principle by the indirect vision periscope inserted through the outer tube. The essence of the method is that the gastroscope is not, as in previous methods, passed into the stomach blindly. In previous methods this was done and resulted in casualties which discredited the method. Drs. Hill and Herschell are now studying the normal appearances of the interior of the stomach. They have not yet begun to use the instrument for diagnosis in the pyloric region. In acute ulcer and hemorrhage they would hesitate to use the instrument, but they think that it will prove useful in the diagnosis of chronic ulcer from malignant disease.

The British Medical Association and the Metric System

In pursuance of the instruction of the annual representative meeting, the council of the British Medical Association has considered the question how the metric system can be adopted with the least inconvenience for prescribing and dispensing. The council recognizes that the full adoption of the system depends on its being made the method according to which students are trained, so that they will learn to think of quantities primarily in grams, centimeters, etc., instead of, as at present, in grains and minims, etc. It therefore recommends that the teaching of pharmacology, both theoretical and practical, shall henceforth be according to the metric system. The advantages of the system, in addition to the simplification of calculations, are (1) the assimilation of the measures used in the laboratory to those adopted in practice, which will make the reports of the investigator more readily intelligible to the doctor and tend to keep him in closer touch with science, and (2) the gain to the work of all nations by being stated in terms mutually intelligible. But the difficulties of introducing the system at present are considerable, as almost all doctors are trained only in the English system and find it hard to adapt themselves to the new system, even when they dispense their own medicines. When they do not dispense there is a difficulty in bringing about cooperation between physician and pharmacists. For doctors trained in the present system the council recommends the adoption of a transitional procedure which would enable them at once to adapt their prescriptions to the metric system and so avoid the drawbacks of a divergence between junior and senior practitioners. The difficulty of the doctor trained to think in terms of grains and minims is to translate his terms into grams and cubic centimeters. If absolute exactitude were necessary he would require the constant use of tables of equivalents. But it is not, as the common mode of administering drugs by spoonfuls shows. The council therefore has recommended the adoption of an ingenious suggestion made by Dr. R. C. Buist, by which a prescription according to the present system may be automatically converted into the metric system. This is done by taking the figure 16 as the factor for converting grams into grains and cubic centimeters into minims. The error is not great, as the exact factors are respectively 15.4324 and 16.906. Now in ordinary prescribing sixteen doses are usually ordered in a mixture, as represented by tablespoonful doses of an 8-ounce mixture. If therefore as many grams or cubic centimeters are dispensed in the whole mixture as grains are ordered for a single dose according to the old system a closely approximate result will be produced. Thus all the doctor need to do is to write a single dose according to the old system, omitting the symbols, and the dispenser may be instructed in such case to follow the metric system. Obviously a similar plan can be adopted for mixtures in which the dose is in teaspoonfuls, that is, ounce or 2-ounce mixtures, the only requisite being that there should be sixteen doses in the mixture. In ordering pills or powders a different procedure must be adopted. In the old system fractions or small multiples of a grain are used. The prescriber must therefore become familiar with the fact that 1 grain = 0.06 gm., which is near enough for practical purposes. To facilitate the work of the dispenser the number of pills or powders ordered should be a multiple of ten.

Felt Manufacture and Anthrax

An important government report on this subject by Mr. H. Verney, an inspector of factories, has been issued. He discusses the preliminary processes in the manufacture of felt and the possibility of eliminating blood-stained material. The raw materials are chiefly East Indian wool, jute, and wool waste. The various ingredients are mixed and placed in superimposed layers. The wool is tightly compressed and has to be pulled apart with considerable force. In doing this some of the dust escapes which may contain the spores of anthrax. A machine called the "willow" is used to tear the fibers apart and in this process a cloud of dust is driven into the face of the attendant. What is required is a willow with an automatic feed and delivery. The material then goes through further teasing in a machine called a "devil" and is then carded, which straightens out and cleans the fibers. In the latter process dust and short dusty fibers are produced. To make the process safer an improved type of willow and the provision of overalls and respirators are considered necessary. It appears almost impossible to eliminate blood-stained material from the wool.

Accidents and the Negligence of the Public

A curious question has engaged the attention of the court of appeal. A man after descending the stairs of a railway station slipped on a piece of banana-skin on the platform, fell against a wall, and sustained a compound fracture of the right arm. He sued the railway company for negligence on the grounds that it was the company's duty to remove dangerous things from their passages. The jury decided in his favor and awarded him $2,500. The company appealed, showing that its servants had orders to sweep their premises twice a day and to remove dangerous matter. There was no evidence as to how the banana-skin came to be on the platform or that any opportunity to remove it had been neglected. The verdict of the lower court was set aside, the presiding judge in the higher court, Lord Justice Williams, pointing out that the onus was on the plaintiff to show that the accident was due to want of reasonable care on the part of the defendants. There was no evidence to show when the banana-skin had been thrown down. It might have been dropped within a second of the accident.

The Crusade Against Tuberculosis

The campaign against tuberculosis continues to develop throughout the country. Of the thirty-five large cities other than London, thirty-three have made arrangements for the bacteriologic examination of the sputum of suspected persons; twenty-one have by-laws against spitting; nine use their isolation hospitals for the reception of patients; three use the workhouse, and two are building sanatoriums for themselves. With regard to notification some difference of opinion and practice exists. The advantages are obvious, but the difficulty is that the subjects of tuberculosis are often shunned as if they were lepers. Of the large cities only four have made notification compulsory but in most of them voluntary notification exists. In London notification of all pauper cases is compulsory. The rooms occupied by a consumptive are disinfected and in some cases this is done weekly. Numerous voluntary agencies engage in the struggle against tuberculosis, in cooperation with the sanitary authorities. They visit the patients and provide clothing, food and other necessaries. In London there are three tuberculosis dispensaries at work and five others are being established. These are all supported by voluntary contributions, though they work in connection with the sanitary authorities. The after-care of patients discharged from sanatoriums is receiving attention. At Bradford there is a Civic Guild of Help which sees that the patient lives, as far as possible, under the same conditions as at the sanatorium.

PARIS LETTER

(From Our Regular Correspondent)

Paris, May 5, 1911.

The Effect of Altitude on Aviators

On April 24, Dr. René Cruchet, *agrégé* professor of the Faculté de médecine de Bordeaux, reported before the Académie des Sciences the result of studies that he, with Dr. Moulinier, professor at the Ecole de santé navale de Bordeaux, had made on a number of aviators. The physiologic troubles felt in an aeroplane ascent are very similar to those which are felt in mountain-climbing, but are felt at a much lower altitude, that is, between 800 and 1,200 meters (about 2,600 to 3,900 feet). Above 1,500 meters (about 5,000 feet) the cold becomes extremely painful and hinders the movements of the aviator very much. The cold on mountains does not become troublesome until a much higher altitude is reached. In the aeroplane ascent the respiration becomes shorter, the heart beats more rapidly; soon headache encircles the temples and a kind of malaise, sometimes affecting the stomach, is soon felt. Humming, whistling or ringing is heard in the ears and hypo-acusia appears. Finally, a violent desire to urinate appears, growing more and more imperative. All the preceding troubles are intensified in the descent; and in addition a burning sensation is felt over the face, which is red and congested; then a headache much more intense than in the ascent, and an invincible desire to sleep. This phenomenon corresponds with what occurs daily in the descent of high mountains by cable road, the Jungfrau, for instance. These disturbances become accentuated on the aviator's landing and even persist several hours afterward, the headache being sometimes accompanied by vertigo. After measuring the blood-pressure before the ascent and at the minute of landing, Drs. Cruchet and Moulinier ascertained that there was at the latter moment a hypertension, both minimum and maximum, shown by differences of from 0.5 to 0.3 cm. of mercury according to the altitude attained. This is one of the most remarkable facts ascertained, in view of the fact that free circulation of air, as well as fatigue, brings about a lowering of blood-pressure. The phenomena of hypertension, of headache, of auditory troubles and of sleepiness increasing during the rapid descent and persisting after landing are due, essentially, to the swiftness with which aviators after reaching a high altitude return to the ground. After taking thirty, thirty-five or forty minutes to reach a height of 2,000 or 3,000 meters, they descend in from five to seven minutes, that is to say, at the rate of 300 to 400, or even 500, meters per minute. Our organism, and specially our circulatory system, is not made to adapt itself to the different atmospheric pressure which the aeroplane attains in so short a space of time. These facts, therefore, not only have a scientific interest, but show that aviators should descend much more slowly than they do at present.

Superintensive and Intermittent Treatment of Syphilis with Mercury in Several Forms

On May 2, Dr. L. Jacquet, physician of the hospitals of Paris, read before the Académie de médecine a paper insisting on the fact that salvarsan, whatever its merits, ought not to cause mercury to be forgotten. Dr. Jacquet declares that the full potentialities of mercury have not yet been demanded from it, and he claims to have a method of administering mercury superior in certain respects to the usual methods. He administers simultaneously, for short periods, lasting from one to five days (1) two pills, each 5 cg. of proto-iodid of mercury, during each of the principal meals; (2) a wash of 20 gm. of Van Swieten's liquor (a solution of 1 part of mercuric chlorid in 100 parts of alcohol and 900 parts of water) in 100 gm. of warm water, to which is added a little laudanum; (3) friction with 2 gm. of mercurial ointment (50 per cent. mercury); (4) an injection of 1 cg. of biniodid of mercury. Then there is a complete pause for five, ten or fifteen days; after this pause, a resumption of the same doses, and so on for three, four or five consecutive periods.

Not counting the gram of mercury incorporated in the ointment, of which the absorbed portion cannot be estimated, though it must be considerable, as has been shown by the well-known curative effect of the rubs, the total of 8 cg. of pure mercury daily absorbed is arrived at. But this superintensive treatment makes use of all the channels of penetration by which medicine can be absorbed, and that without irritation, since, while the total mass of mercury absorbed is enormous, the effort demanded of each channel of absorption is moderate. Moreover, the treatment is discontinuous, that is to say, by successive mercurial attacks, sufficiently distant from each other so that elimination may occur.

Dr. Jacquet has treated about eighty patients in this way. During the first stage, the chancre has visibly retrogressed and so has the adenitis and the duration seems to have been considerably shortened. During the second period, action is rapid on the roseola and on the greater number of the cutaneous syphilids. There is very weak action or none at all on the mucous tracts, as is usual in the classic treatment. Here, without doubt, salvarsan is greatly superior. On the other hand, a remarkable action has been observed on the general phenomena and on the nervous reactions of the period. During the tertiary period, Dr. Jacquet expects only success, and has obtained results as remarkable as with salvarsan. The superintensive treatment is indicated in all cases in which one wishes to act quickly and forcibly and in which one cannot or does not wish to employ salvarsan. It ought to be instituted only on patients daily and minutely observed, and only after the mouth and the teeth have been put in perfect order, and it has been ascertained that the kidney and the renal functions are intact. At the first untoward sign the treatment ought to be suspended.

BERLIN LETTER

(From Our Regular Correspondent)

BERLIN, May 5, 1911.

Personal

Professor Gerhardt, director of the medical clinic at Basel and son of the renowned clinician, has been called to Würzburg as successor of Prof. v. Leube.

At the end of the summer semester Professor Trendelenburg, the prominent Leipsic surgeon, will resign his teaching position, although he is only 67.

Professor Eversbusch, director of the Munich eye clinic, celebrated his twenty-five year jubilee as professor.

Privy councilor Professor Lent recently died at the age of 79. Lent has rendered great service in the field of public sanitation and in working for the professional interests of German physicians. He was one of the founders of the German medical league (*Aerztevereinsbund*), and for a long time its second chairman, and the chairman of the executive committee of the Prussian Medical Chamber (*Aerztekammer*).

Annual Meeting of the German Surgical Society

In the latter part of April the *Chirurgen-Kongress* was held as usual in Berlin. The attendance at the meeting is increasing from year to year; this year there were quite 900 surgeons present. The first session was opened by the president, Professor Rehn, of Frankfort, with a memorial address on von Langenbeck whose hundredth birthday was celebrated November 9 of last year. Of the numerous subjects treated at least the most important may be mentioned.

DISINFECTION OF HANDS AND FIELD OF OPERATION

Küttner of Breslau discussed disinfection of the hands and field. Among chemical disinfectants the phenol preparations have constantly gained more adherents. Alcohol has established its power of fixing germs, but the views regarding its practical application are still at variance. Tincture of soap is not as reliable in its action as was formerly assumed. Heusner's method with iodobenzin has an established position; rubber gloves are used at septic operations by almost all operators, but not by so many in aseptic operations. The use of tincture of iodin for the rapid disinfection of the operation field is continually gaining more adherents, although Kocher of Bern holds that evidence has not yet been produced for its superior efficacy.

EXOPHTHALMIC GOITER

Kocher reported on hyperthyroidism and its treatment. In all cases of this disease he has found pathologic changes in the thyroid gland with increase of its secretion and increase in the iodin content of the secreted fluid. Experimentally the disease can be produced by injection of the expressed juice of the thyroid gland, or by the substance of the gland, or by iodin and the thyroid juice. Undesignedly the symptom-complex of exophthalmic goiter has been aggravated in man by the action of these medicaments. A change in the blood picture occurs as a result of the internal secretion of the thyroid gland. On the basis of this blood finding the diagnosis may be made of excessive secretion in the thyroid gland. There are, however, clinical pictures that vary from the genuine hyperthyroidism which are to be explained by the supposition that the juice of the thyroid acts on different nerves. As causes of the disease, severe psychic shock, the use of iodin in diseases of the thyroid, and infectious diseases must be considered. The phenomena are increased at the time of certain physical changes in women. As the entire disease depends on an excessive increase of the glandular function, improvement can be effected only by surgical measures; that is, by removal of part of the diseased gland. Failures occur only from the removal of too little of the thyroid. The mortality of his 535 operations on the thyroid has been 3.1 per cent. The best remedy is early operation at the beginning of the disease. Klose of Frankfort has produced the disease experimentally by injection of the expressed juice of the diseased human gland; he regards this affection as an iodin poisoning. Garrè of Bonn has seen marked improvement in the heart symptoms of exophthalmic goiter after removal of the thymus. In his opinion, there are cases which are produced by a disease of the thymus gland. Halsted of Baltimore discussed the danger of tetany from the removal of small glandular formations lying by the side of the thyroid gland. This may be avoided by careful operation and by the administration of chemical remedies. Dollinger of Budapest recommended partial removal of the outer wall of the orbit in extreme exophthalmos to prevent changes in the cornea and pain. Eiselsberg of Vienna also regards this disease as an affection of the thyroid and internal treatment as unsuccessful. The operation is more dangerous than other thyroid operations because, as a rule, the patients come too late and as a consequence much greater heart changes have occurred. He has had six deaths among seventy-one operative cases, which is chiefly to be explained by the fact that the patients came to operation too late. His curative results have been brilliant. He is very enthusiastic for early operation. Küttner of Breslau has investigated cases of severe and long-continued disease, and has found that patients treated with internal remedies have all remained uncured. Of the others over 60 per cent. were cured or materially benefited. Schultze of Berlin found among twenty cases eighteen in which the thymus was demonstrable by fluoroscopy, and in eight of nine fatal cases he found the thymus enlarged. This confirms the experience of Garrè regarding the influence of the thymus in the origin of exophthalmic goiter. Rehn of Frankfort obtained a marked improvement by operation in a case of severe psychic affection. Kocher of Bern has frequently seen psychic symptoms without operation, but he has been unable to find any case of an unfavorable effect of the operation.

TRANSPLANTATION OF TISSUES AND PARTS OF LIMBS

Lexer of Jena made an extensive report on the transplanting of skin, mucous membrane, fatty tissues, nerves, blood-vessels, tendons and periosteum. In the transplantation of tendons the favorable action of a functional stimulus is especially important. The periosteum is well suited for free transplantation both in the same organism and in other individuals. Cartilaginous tissue, on account of the easily accessible sources from which it can be taken, is especially suitable for transplantation in the same individual. From these two peculiarities of bone and cartilage, results the possibility of transplantation of entire joints which has been executed with success by the author. The transplantation of entire limbs has given no utilizable results from experimental work. Our surgical technic justifies us in the hope that a nearer approach to the solution of all these questions will be made. König, of Greifswald, has made attempt to close open wounds of the mucous membrane by free transplantation. This has been successful even with large openings in the stomach and intestine. The method has the disadvantage that it gives ready opportunity for broad adhesions. In closure of openings of the bladder and rectum, the results were good. Hohmeier, of Greifswald, has further tested the above question by experiment, especially in closing wounds of the air passages. Schöne, of Marburg, discussed the possibility of transplanting tissues from a foreign species. The difficulty of securing healing depends on the peculiarity of the metabolism. Landois, of Breslau, introduced parathyroids into the circulation but the transference was not successful. According to Rehn, transplantation of fatty tissue does well in the same individual but badly in a foreign organism. For bridging gaps in bone as well as in bone operations in general, the horn of animals is very suitable. Küttner made a further report on a patient in whom the head of the femur had been removed and was replaced by the corresponding part of the femur of a cadaver. As the patient had died later of a new tumor formation, a preparation of the transplanted part could be shown, and a completely solid union of the two parts was evident. In addition a second patient was shown who had been operated on in a similar way, nine months before, and in whom various subsequent operations had not endangered the union of the implanted part of the cadaver; also Roentgen pictures of a third patient were shown. The method of Lexer thus makes it possible with the parts of a cadaver to realize a temporary and probably a permanently successful transplantation of a joint. Tilmann, of Cologne, replaced the loss of a lower jaw by bone from the tibia, but the bone later was thrown off. Goebell, of Kiel, cured a dislocation of a patella by transplantation of tendons and he has successfully sutured bone with strips of periosteum. Baum, of Kiel, tried to cure pseudarthrosis by transplantation of bone but without success. Eiselsberg, of Vienna, replaced parts of the urethra by blood-vessels, and [illegible]eissler, of Graz, by the vermiform appendix. Friedrich, of Marburg, warned against too extensive resection a[illegible] of the bone because new tumors very easily arise in such cases. Müller, of Rostock, warned against too great expectations from the transplantation of bones from the cadaver. Bramann, of Halle, has closed defects in the dura mater with fat, and König, of Greifswald, has replaced the lacking lower jaw with ivory. Lexer, of Jena, presented a patient who had suffered an extensive ulceration and constriction of the esophagus from drinking sulphuric acid. Lexer made a new esophagus, from the stomach to the neck, out of a strip of intestine and the skin, with excellent functional results. The patient was presented and ate and drank solid and liquid substances, and the passage of food into the stomach could be observed.

MALIGNANT TUMORS

Werner, of Heidelberg, stated that he had not seen much good result from the injection of serum for the cure of malignant tumors. Moreover, no marked success has been achieved by other remedies, such as the *x*-ray and radium. He recommended open treatment of the wound and its subsequent treatment with *x*-ray in case of very advanced, scarcely operable tumors. In other respects, he regards operation as the most effective means for the treatment of malignant growths. Bier, of Berlin, showed a patient who had been cured of a very extensive inoperable cancer by an incomplete operation and subsequent treatment with boric acid-gelatin. Dreyer, of Breslau, has used salvarsan in a case of malignant adenomas with good results.

OPERATIONS ON HEART AND LUNGS

Hesse, of Dresden, reported seven cases of wounds of the heart, with six operative cures, and he gave in conclusion some hints on the operative technic and after-treatment of such patients. E. Hesse, of St. Petersburg, reported twenty-one wounds of the heart which he had operated on in the last seven years, curing six of the patients. All those in whom the auricle was injured, died. It is of very great importance that the patient come to operation very early. Fuchsig, of Schärding, operated with success on a wound of the heart complicated by a wound of the diaphragm. Wilms, of Heidelberg, recommended an intercostal incision in order to expose the heart; he has performed four operations on the heart, with the loss of two patients. Schumacher, of Zurich, called attention to the possibility of securing the atrophy of a certain part of the lung and thereby curing an inflammatory process in it. Two operations of this sort have already been made. A careful study of the anatomic distribution of the vessels will facilitate operations of this kind. Müller reported the operative removal of a tuberculous lobe of the lung. Kümmell, of Hamburg, removed an entire lung on account of a tumor formation but the patient died later as the result of purulent inflammation of the bronchi. Körte, of Berlin, and Friedrich reported a large number of operations on account of tuberculosis. Wullstein, of Halle, suggested that the lung might atrophy after ligation of the bronchi.

MOVABLE CECUM

Wilms discussed movable cecum and chronic typhlitis. The attacks of pain which formerly were ascribed to typhlitis may be occasioned by adhesions in the region of the appendix and cecum or ascending colon, so that dragging takes place when the intestine becomes full, or by kinks or torsion of the colon at the hepatic flexure or the attachment of the cecum, temporarily occluding the intestine. Wilms described still another clinical picture which has nothing to do with the above-mentioned lesions, but is the result of stagnation of the intestinal contents in the cecum. The contents may remain in the cecum for twenty-four hours or more, as can be shown by the Roentgen pictures. It becomes inspissated there, so that the other parts of the large intestine are subjected to increased labor in driving on the stool. Such patients generally suffer from a chronic constipation. The cause for the long stay of the intestinal contents in the cecum must be a reversed peristalsis in the ascending colon. This, in connection with the pathologic contraction produced by inflammatory irritation, explains the attacks of pain. These spastic contractions of the cecum and colon, which are secondarily stretched unduly long, cause dragging of the movable cecum on its mesentery. The pains with this chronic typhlitis are dragging pains, aggravated by a slight inflammatory condition in the region of the mesenteric nerves. For the recognition of this condition, in addition to palpation, by which a gurgling tumor is recognizable, the Roentgen picture is unconditionally essential. The successes achieved by Wilms by fastening up the cecum indicate that not only can the pains be relieved but that the chronic constipation may be permanently cured. Not less than 75 per cent. of the patients operated on had normal stools after the operation without further treatment, while previously a stool could be secured only by the use of laxatives. In case of an unusually large cecum, Wilms recommends the exclusion of the cecum by direct union of the lowest part of the small intestine, next the cecum, with the transverse colon. An operation should be undertaken if the internal treatment of the constipation is difficult on account of social reasons or has been unsuccessful. De Quervain, of Basel, discussed the question how far we are justified in treating chronic disease of the colon by operative measures. The exclusion of the greater part of the large intestine, recommended by some, has rightly been condemned, as a vegetable diet is not tolerated in such cases. He recommends merely the implanting of the cecum into the transverse colon. Sonnenburg, of Berlin, could not agree with Wilms, since the cecum when it is movable causes symptoms only if inflammatory conditions are present. The Roentgen picture is unreliable. According to his experience, he would warn against too hasty resort to operation. Even cecopexy frequently has not the desired result. Stierlin, of Basel, reported three cases of severe obstipation operated on with success. The results achieved were demonstrated by the *x*-ray. Klose, of Frankfort, holds torsion of the cecum to be the cause of the disturbances, and also frequently the cause of acute appendicitis. Dreyer, of Breslau, found a movable cecum in 67 per cent. of his necropsy investigations and considers this anomaly, therefore, not the cause of the symptoms. Wilms' method of fastening up the cecum does not correspond to the physiologic requirements. Fromme, of Berlin, regards a certain mobility of the cecum in women as necessary. Körte, of Berlin, is accustomed to operate only with a view of preventing an acute attack in case of chronic lesions of the appendix. Sprengel, of Braunschweig, takes a similar view. Rehn, of Frankfort, supported the view of Wilms.

Association News

THE LOS ANGELES SESSION

Additional Data About Railroad Trains and Reunions at the Annual Session

The Journal contained last week an illustrated article on Los Angeles, the programs of the sections, the lists of hotels, trains, routes, entertainments, etc. Twenty-seven pages were devoted to the coming meeting at Los Angeles, June 27 to 30. Much of this matter had previously been published in The Journal. The following are additional items which have been received since.

HARVARD MEDICAL ALUMNI REUNION

A reunion and dinner of graduates of the Harvard Medical School who are attending the session of the American Medical Association at Los Angeles will be held Tuesday evening, June 27, at the University Club. All Harvard men are cordially urged to attend and to send word of their intention to Dr. Elliott Alden, 609 Exchange Building, Los Angeles, or to communicate with him at Registration Headquarters on their arrival in Los Angeles. David Cheever, M.D., Secretary.

20 Hereford Street, Boston.

SPECIAL TRAIN FROM TEXAS

Texas members have arranged to run a special train to the Los Angeles session over the Fort Worth and Denver City Railway. The train will leave Fort Worth at about 11 p. m., June 21, and will reach the official route of the American Medical Special at Trinidad, Colo., some three hours ahead of that special. It is anticipated that enough will go in this party to fill one good-sized train. Further particulars may be had from Dr. Holman Taylor, Fort Worth, secretary of the State Medical Association of Texas.

A KENTUCKY TRAIN

Dr. A. T. McCormack, Bowling Green, Ky., announces that the Kentucky party will leave Louisville for Chicago, over the Monon Route, at 8:06 a. m., Wednesday, June 21. From Chicago the route will be over the Santa Fe. Pullman reservations for the trip may be made through Mr. E. H. Bacon, of the Passenger Department of the Monon, in Louisville. The entire expense of the trip should not exceed $150 for each person, including hotel bills and everything. At an additional expense of about $55.50 the trip through the Yellowstone Park may be made.

A CAR FROM OKLAHOMA

Members of the Southwest Medical Association and their friends are invited by the officers of that body to join the A. M. A. special. A special Pullman will leave Oklahoma City, Okla., via A. T. & S. F. and will be attached to the A. M. A. special at Newton, Kansas. For reservation or further particulars address the ticket agent of the A. T. & S. F. R. R., Oklahoma City, Okla.

SPECIAL PARTY RETURNING

A party will leave Los Angeles, Sunday, July 2, stopping at Santa Barbara, San Francisco, Portland, Tacoma and Seattle, with a daylight boat ride across the sound to Vancouver. From this point the homeward trip will be through the gorgeous scenery of the Canadian Pacific railway, with stop-overs at Banff and other points and at Rochester, Minn. Round trip tickets must be purchased before starting, and should specify this route. For full information and itinerary, address Dr. Charles Wood Fassett, secretary, Medical Society of the Missouri Valley, St. Joseph, Mo.

RATES IN THE FAR WEST

The Southern Pacific has made a rate of one and one-third fare for the round trip in California, Nevada and Oregon. This is on the certificate plan. Arrangements will be made for the signing of the certificates at Los Angeles at or near the Registration Department in the Hamburger Building.

ANOTHER ROUTE FROM CHICAGO

Dr. Liston H. Montgomery, president of the American Association of Medical Examiners, has submitted the following itinerary and general information and invites readers of The Journal and their friends to consider its advantages. Leave Chicago 10:45 p. m., Wednesday, June 21, by the C. & N. W. Ry., in special Pullman cars running to Los Angeles without change. This train will arrive at Denver June 23, 7:30 a. m., and cross the Rockies on the Denver and Rio Grande by way of the famous Tennessee Pass, Grand Cañon of the Arkansas and the Royal Gorge of the Grand River, the mightiest chasm in the universe traversed by steel rails. At Salt Lake City there will be a stop-over of three hours with a complimentary organ recital in the Mormon Temple. Los Angeles is reached at 4:30 p. m., Sunday, June 25. The cost per capita for twenty-one days' outing from Chicago to Los Angeles, San Francisco, and return is, approximately, $160, a liberal estimate. As described in The Journal last week, for a little additional cost one may return by the northern routes through the great northwest and Puget Sound region and the beauties of the Canadian Pacific.

THE BURLINGTON TRAIN

The large number of prominent Chicago and eastern physicians who have made reservations for space on the Scenic Colorado Special organized by a committee consisting of Drs. Robert T. Gillmore, Charles B. Reed and Sydney Kuh, plainly indicates that this cool and attractive route, coupled with the desirable stop-over and side-trip features which have been arranged, is a favorite. This train will leave the Union Depot, Chicago, at 11 p. m., Wednesday, June 21, via the Burlington Route and will run through the heart of delightful Colorado via the scenic line of the Denver & Rio Grande R. R. to Salt Lake City, thence via the San Pedro, Los Angeles & Salt Lake R. R. (Salt Lake Route) direct to Los Angeles, arriving at noon, Monday, June 26. Among the desirable features of this route are visits to Denver, "Queen City of the Plains," Colorado Springs and Manitou, "The Saratoga of the West"; a trip to the summit of Pike's Peak, a trip through the famous Royal Gorge; miles of grand mountain scenery; a plunge in Glenwood's great, open-air swimming pool and a special recital on the organ in the tabernacle of the Mormons. Officials of the Burlington declare that this special train de luxe will be one of the finest trains that ever left Chicago and suggest that those who have not done so should make their reservations without delay through Dr. Robert T. Gillmore, 31 North State Street, or Mr. A. J. Puhl, General Agent, Passenger Department of the Burlington Route, 141 South Clark Street, Chicago.

Marriages

Anna Francis Ries, M.D., Ogden, Utah, and Maurice Foster Finley of Bishop, Cal., at Salt Lake City, Utah, May 12.

Wallace Joseph Charles Aubry, M.D., Champlain, N. Y., to Miss Dora Thomas of Granville, N. Y., May 10.

Edgar Lee White, M.D., Lewiston, Ida., to Miss Catherine Leyden Rouse of Spokane, Wash., April 7.

Harvey M. Rauch, M.D., Pittsburg, Pa., to Miss Laredo Shafer of Somerset, Pa., May 10.

Stillwell Corson Burns, M.D., to Miss Reba Faunce Eyre, both of Philadelphia, May 10.

Samuel Wilcox Forney, Chicago, to Miss Vera J. Aldrich of Petoskey, Mich., March 22.

Jay L. Armstrong, M.D., to Miss Katherine A. Stevens, both of Chicago, May 14.

Deaths

Andrew Marcus Trawick, M.D. Vanderbilt University, Nashville, Tenn., 1881; a member of the American Medical Association; formerly president of the Nashville Academy of Medicine; a Confederate veteran; formerly a clergyman of the Methodist and Cumberland Presbyterian churches; died at his home in Nashville, May 8, from septicemia following an operation for facial neuralgia, seven weeks before, aged 64.

William Henry Bell, M.D. Toronto School of Medicine, 1864; a member of the Indiana State Medical Society and its president in 1883; formerly a member of the American Medical Association; from 1865 to 1868 attending physician in the Southern Ohio Hospital for the Insane, Dayton; for twenty years local surgeon of the Wabash System; died at his home in Logansport, May 3, from cerebral hemorrhage, aged 71.

James W. Morgan, M.D. College of Physicians and Surgeons, Keokuk, Ia., 1876; assistant surgeon of the Fortieth Iowa Volunteer Infantry during the Civil War; a practitioner since 1859; a member of the staff of the Moline Public Hospital and St. Anthony's Hospital, Rock Island, Ill.; chief examiner and medical director of the Home Forum; died at his home in Moline, May 11, from heart disease, aged 73.

Elisha Leach, M.D. University of Michigan, Ann Arbor, 1854; city physician of Detroit in 1870 and a member of the health board in 1887; for twenty years a practitioner of that city and later a resident of Galveston and Corpus Christi, Tex.; for many years a member of the American Medical Association; died in the Spohn Sanitarium, Corpus Christi, Dec. 2, 1910, from acute dysentery, aged 80.

Daniel J. Langton, M.D. Jefferson Medical College, 1880; of Shenandoah, Pa.; a member of the American Medical Association; a trustee of the State Hospital for Injured Persons of the Anthracite Coal Regions of Pennsylvania, Fountain Springs; coroner of Schuylkill County in 1880; a member of the board of health of Shenandoah; died in Atlantic City, N. J., May 13, from pneumonia, aged 53.

William Chalmers Baird, M.D. Medico-Chirurgical College of Philadelphia, 1896; a member of the American Medical Association and American Association of Life Insurance Examining Surgeons; formerly of McKeesport, Pa., but forced in 1905 to go to Colorado on account of tuberculosis; died at his home in Colorado Springs, May 8, two days after an operation for disease of the bladder, aged 39.

William Richard Cunningham Latson, M.D. Eclectic Medical College of the city of New York, 1904; of New York City; editor of a magazine known as *Health Culture*; was found dead in his apartment in New York City, May 11, from the effects of a gunshot wound of the head, believed to have been self-inflicted in accordance with a suicide pact, aged 40.

Benjamin F. K[illegible]ables, M.D. College of Physicians and Surgeons, Keokuk, Ia., 1852; a member of the Iowa State Medical Society; surgeon of the Third Iowa Volunteer Infantry during the Civil War; representative in the state legislature in 1872 to 1874; for fifty-eight years a practitioner of Pella; died at his home, May 9, from cystitis, aged 82.

Henry Clay Hendrick, M.D. University of Michigan, Ann Arbor, 1853; a member of the American Medical Association; surgeon of the 157th New York Volunteer Infantry and later division surgeon during the Civil War; a member of the Cortland County (N. Y.) Board of Pensions; died at his home in McGraw, May 5, aged 83.

Cumberland George Herndon, M.D. University of Virginia, Charlottesville, 1873; Medical Inspector U. S. Navy, retired in 1905 for incapacity resulting from an incident of service, after thirteen years and four months sea service, and fifteen years and ten months shore duty; died at his home in Washington, D. C., May 6, aged 60.

William Henry Harrison, M.D., New York University, New York City, 1885; formerly of Easton, Pa.; professor of materia medica and obstetrics, and instructor in diseases of the mind and nervous system in Flint Medical College, New Orleans; died in that city, May 8, aged 58.

Robert Harris Hargrove, M.D. Vanderbilt University, Nashville, 1881; Bellevue Hospital Medical School, 1882; of Alpine; a member of the Medical Association of the State of Alabama; died at the home of his sister near West Harpeth, Tenn., May 8, from cerebral hemorrhage, aged 50.

William Russell Dunham, M.D. Harvard Medical School, 1865; a member of the Cheshire County (N. H.) Medical Society, Connecticut River Medical Society and New Hampshire Association of Military Surgeons; died at his home in Keene, May 8, from heart disease, aged 77.

Samuel Stuart Hackwell, M.D. Detroit College of Medicine, 1905; of Blaney, Mich.; a member of the Michigan State Medical Society; school examiner of Schoolcraft County for several years; died at the University Hospital, Chicago, May 1, from tumor of the brain, aged 32.

Alexander Miller Stout, M.D. Georgetown University, Washington, D. C., 1880; a member of the American Medical Association and superintendent of the Chicago City Hospital for Contagious Diseases; died in that institution, May 20, from cerebral hemorrhage, aged 57.

Norman F. Hill, M.D. University of Maryland, Baltimore, 1882; of Baltimore; surgeon-in-chief of the Baltimore City Passenger Railway Company for twenty-seven years; died in Mercy Hospital in that city, May 12, after an operation for cholelithiasis, aged 63.

Edwin Neville Dougherty, M.D. New York University, New York City, 1896; for several years tenement house inspector under the department of health of New York City; died at his home at Waterbury, Conn., May 8, from nephritis, aged 38.

Lester Bomar Bell, M.D. Rush Medical College, 1906; health officer of Cushing, Wis., and proprietor of a private hospital in that place; died at his home, May 10, from injuries received in an automobile accident twelve hours before, aged 27.

Lester Augustus Elster, M.D. Bellevue Hospital Medical College, 1867; a veteran of the Civil War; for thirteen years chief of staff of the Mendocino State Hospital, Eureka, Cal.; died at his home in Alameda, Cal., May 1, aged 68.

William C. Coburn, M.D. Philadelphia University of Medicine and Surgery, 1886; for many years a practitioner of Washburn, Wis.; died at his home at Diamond Lake, April 28, from cerebral hemorrhage, aged about 70.

Reuben Alexander Wall, M.D. University of Maryland, Baltimore, 1904; for several years medical examiner for the Baltimore and Ohio Railroad at Fremont, W. Va.; died at his home in Baltimore, May 4, aged 34.

John Quarles Sutton, M.D. Vanderbilt University, Nashville, Tenn., 1887; a member of the Tennessee State Medical Association; died at his home in Chattanooga, May 12, from carcinoma of the stomach, aged 48.

Paul DeWitt Hale, M.D. Medical College of Ohio, Cincinnati, 1901; was found unconscious in his office in Dayton, O., May 9, and died from heart disease, a few moments later in the Miami Valley Hospital, aged 33.

Coleman E. Riggan, M.D. Memphis (Tenn.) Hospital Medical College, 1896; a member of the American Medical Association; died at his home in Monroe, Okla., April 17, from lobar pneumonia, aged 57.

Otero Crandall Reynolds, M.D. University of Louisville (Ky.), 1878; a member of the Nebraska State Medical Association; died at his home in Lincoln, Mey 16, from cerebral hemorrhage, aged 53.

Edward Haddock Pollack, Jr., M.D., New York University, New York City, 1897; a member of the Medical Society of the County of Kings; died at his home in Brooklyn, Jan. 17, aged 35.

Morris Beckstead, M.D. McGill University, Montreal, 1878; for twenty-five years a practitioner of Lisbon, N. Y.; died at his home in that place, May 7, from nervous breakdown, aged 56.

Wilson Levi Hawkes, M.D. Medical School of Maine, Brunswick, 1872; a member of the Maine Medical Association; died at his home in York Harbor, May 4, from nephritis, aged 63.

Austin D. Roth, M.D., Drake University, Des Moines, Ia., 1908; of Marshalltown, Ia.; died at St. Thomas' Hospital, Marshalltown, May 8, from tuberculous meningitis, aged 33.

Emery Miller, M.D. Jefferson Medical College, 1894; a member of the Altoona (Pa.) Medical Society; died at his home in Duncansville, May 10, from acute pancreatitis, aged 41.

Aaron Busby (license, Ohio, years of practice, 1896); for twenty-five years a practitioner of Stark County, O.; died at his home in Osnaburg, May 9, of tuberculosis, aged 67.

John Ross Trott, M.D. Missouri Medical College, St. Louis, 1857; for many years a resident of Virden, Ill.; died in San Diego, Cal., from cerebral hemorrhage, May 3.

Leonidas C. Taylor, M.D. Jefferson Medical College, 1848; died at the home of his son in Oxford, N. C., April 23, from the effects of a fall two days before, aged 87.

[illegible] [illegible], M.D., State University of Iowa, College of [illegible] Iowa City, 1893; died at his home in [illegible], aged 52.

Adam Lutheran Jackson, M.D. Columbus (O.) Medical College, 1878; died at his home in Columbus, May 7, from cerebral hemorrhage, aged 61.

Herbert Stanton Darling, M.D. Jefferson Medical College, 1883; died at his home in Fredericktown, O., March 16, from cardiac asthma, aged 49.

Henry A. Jones, M.D. Hospital College of Medicine, Louisville, Ky., 1903; died at his home in Louisville, May 10, from pneumonia, aged 31.

Jacob W. Myers, M.D. Bennett Medical College, Chicago, 1881; died at his home in Goshen, Ind., May 6, from nephritis, aged 70.

Andrew J. Bevan, M.D. University of Pennsylvania, Philadelphia, 1886; died at his home in Bryn Mawr, Pa., May 9, aged 62.

The Propaganda for Reform

IN THIS DEPARTMENT APPEAR REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY, TOGETHER WITH OTHER MATTER TENDING TO AID INTELLIGENT PRESCRIBING AND TO OPPOSE MEDICAL FRAUD ON THE PUBLIC AND ON THE PROFESSION

[CONTRIBUTION FROM THE CHEMICAL LABORATORY OF THE AMERICAN MEDICAL ASSOCIATION]

CHICHESTER'S DIAMOND BRAND PILLS

W. A. Puckner and L. E. Warren

A preparation known as "Chichester's Diamond Brand Pills" is, and has been for years, extensively advertised in newspapers, drug journals, etc. While in these advertisements nothing is said regarding the therapeutic uses of the preparation, the public to a large extent, knows it and buys it as an abortifacient remedy. This is shown by letters which THE JOURNAL receives of which the following is an example:

> If it is possible would you kindly give me the ingredients of Chichester's Diamond Brand Pills? They are sold to produce abortion and are guaranteed under the Food and Drugs Act, the serial number being 1867.

A trade package, "large size," of Chichester's Diamond Brand Pills was purchased on the open market and examined with especial reference to the presence of commonly reputed abortifacient drugs. The pills were put up in a small tin box, "elegantly and artistically decorated in red, black and gold,"—"air, dust and moisture-proof, with hinged lid," on which is printed:

"Distributed by Chichester Chemical Co."

The package contained twenty pills and considerable advertising matter, wrappings, etc. Attention is called to some of the statements in a booklet contained in the package entitled:

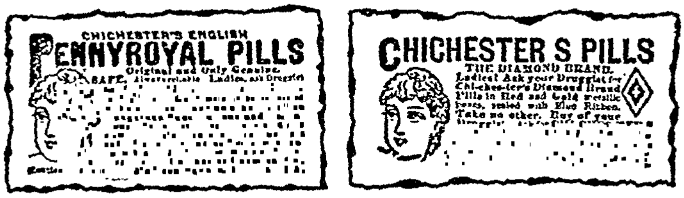
> "Relief for Ladies. Directions for Use of Chichester's Diamond Brand Pills."
> "To Our Old Customers,
> "Change of Name.
>
> "Our Remedy was formerly called 'Chichester's English Pennyroyal Pills,' but on account of unscrupulous imitations offered under the name of 'pennyroyal' our remedy will hereafter be known only as 'Chichester's Diamond Brand Pills.' "
>
> "Treatment may be begun at any time, although in some instances the pills are more effective if taken about the regular time for the menstrual flow. As a rule, however, it is found that more satisfactory results are secured by beginning treatment at once and continuing it until the pills give relief."

Only one small page each is devoted to "Amenorrhea," "Dysmenorrhea" and "Directions," the remainder is taken up with testimonials, cautions to "Take no other," "Refuse all others," "Beware of imitations," etc.

EXAMINATION

The aggregate weight of the pills contained in the package amounted to 8.7963 gm., or about 0.44 gm. for each pill. The pills, when deprived of their coatings, weigh about 0.2600 gm. (4 grains) each, the coating constituting more than half their original weight. The coatings consist essentially of calcium carbonate, although a small quantity of sugar is present.

By the usual tests the presence of some preparation of aloes and of ferrous sulphate was demonstrated. Tests for the presence of black hellebore, tansy, pennyroyal, savin and certain other reputed abortifacients resulted, in each case, negatively. Ergot or its preparations could not be detected.


CHICHESTER'S ENGLISH
PENNYROYAL PILLS
Original and Only Genuine.
SAFE, Always reliable. Ladies, ask Druggist
CHICHESTER S PILLS
THE DIAMOND BRAND.
Ladies! Ask your Druggist for Chi-ches-ter's Diamond Brand Pills in Red and Gold metallic boxes, sealed with Blue Ribbon. Take no other. Buy of your

BEFORE AFTER

Photographic reproductions (reduced) of advertisements of Chichester Pills before and after the passage of the Food and Drugs Act. The Association chemists found no pennyroyal in these pills and under the pure food law it would be illegal to call them "Pennyroyal Pills." Was this responsible for the change in name?

While the identification of mixed plant extracts, especially those which contain constituents not readily isolated, is a matter of great difficulty and is often impossible, it would appear, from the examination, that the chief medicinal constituents of the pills are aloes and iron sulphate, the latter ingredient being present to the extent of about ½ grain to each pill. The statement of the manufacturer that the pills are sugar coated is scarcely warranted by the facts. The change of name from "Chichester's English Pennyroyal Pills" to one in which the word "*Pennyroyal*" does not occur is significant in view of the fact that no pennyroyal could be found in the pills. Under the Food and Drugs Act it would be illegal to sell as "Pennyroyal Pills," pills that did not contain that constituent.

A package of these pills retails for $2, or at the rate of 10 cents for each pill. An examination of the price lists of several large manufacturers of pharmaceuticals reveals that pills very nearly corresponding to the above may be bought in quantities for about 22 cents a hundred. The profits in retailing at $10 per hundred ought to be satisfying even to the most avaricious.

EDITORIAL NOTE: The above calls attention to a vicious state of affairs—the selling to the public of drugs of reputed abortifacient properties. We believe there is not a state in the Union which has not adopted laws against it, but in spite of this, these preparations, in thin disguises, are shamelessly advertised in newspapers and as shamelessly and boldly sold over the counters of many drug stores. While it is true that many of these nostrums are merely *fraudulent*, rather than dangerous, yet not a few contain potent and—for the purpose for which sold—villainous drugs.

As shown by our chemists, Chichester's Diamond Brand Pills seem to be simply the old aloes and sulphate of iron pills with slight modification. While these pills were sold *originally* as "pennyroyal" pills, the Food and Drugs Act, which forbids lying on labels, has apparently compelled the manufacturers to omit the word "pennyroyal."

Since it is well known that there is no drug or combination of drugs which, taken by the mouth, will with certainty produce abortion, it is not probable, to judge from the constituents found in these pills, that they would produce the result desired by the purchaser. Nevertheless, the use of this nostrum is pernicious and in the interest of public health and public morals its sale, and the sale of similar nostrums, should be prohibited.

THE LIMITATIONS OF TABLET-MAKING

To the Editor:—From time to time I notice in the columns of The Journal, assays of the tablet and pill products of different manufacturers and as a rule they are found wanting in label-stated quantity of ingredients; I think that I am in a position to throw some light on this subject and to relieve some of our reputable manufacturers from the suspicion of intentional fraud. In the first place, let me say that many substances are put in tablet and pill form which never should be exhibited in this manner as they are of a volatile nature and are bound to deteriorate.

A number of years ago, I was foreman of manufacturing in the pill and allied departments of Parke, Davis & Co. and when I was given charge, I was instructed to spare no expense nor trouble to make each preparation which left my department, the best of its kind, both in the exactness of its compounding and in pharmaceutical elegance. Shortly after assuming charge I was "called on the carpet" and the "riot act" was read to me in very plain and unmistakable tones; someone had made a comparative analysis of some of the products of a number of leading manufacturers and ours was away down the list. I did not have much to say but went back to my office to think.

Up to that time, no book account had been kept with each formula as issued; a formula was written for a certain number of pills and the ingredients were most carefully weighed and the weights checked. The ingredients were then carefully mixed and the total mass was made up to a certain specified weight and this was divided into a specified number of pills each having a specified weight. If a pound, or 7,000 grs., of pill mass was to be cut into ¼ gr. pills, manifestly, there would be 28,000 pills as the result and it seems that it had always been assumed as an established fact that it must be so. In cutting these pills sixteen of them should weigh 4 grains (a large number being taken to obviate individual variation) and at frequent intervals the forewoman would go from table to table making these weights and I may say that the perfect exactness of division was often a wonder to me.

After I had thought over my troubles a while, I asked myself whether this thing really worked out in practice as well as in theory; so I went to the dry-room and called out a formula of ¼ gr. morphin sulphate pills which had just been cut and which should number 70,000. On counting an ounce and weighing the remainder, I found that instead of 70,000, I had 110,000. Investigation of other formulas showed a like result, the variation being greater in the smaller pills; analyses of goods on hand showed them all deficient and, worst of all, no one could even suggest an explanation.

I immediately made up one pound of "dummy" mass and gave to our most expert girl to cut into ¼ gr. pills; I watched every move, myself, and weighed repeated lots of thirty-two pills each to be certain that each weighed exactly ¼ gr.; when the result was weighed and counted, I had some 34,000 instead of 28,000 pills. This thing went on day after day until the entire department was upset; finally, after studying this matter for days, I was sitting by one of the tables watching the girl work and I noticed that from time to time she would pick up a small camel's-hair brush and dipping it in a pile of terra alba on her table would, very lightly, brush over the strips and partly cut pills; I at once asked her how much of this material was required to cut a pound of mass; she replied, "hardly any." By weighing the supply before using and again after a pound had been cut, it was found that ½ ounce of this powder was consumed in cutting 1 pound of mass into ¼ gr. pills. This meant 218 grains, which divided into ¼ gr. pills, made an addition to the written formula of 872 pills and we had found the leak which had been going on for years. After this, each formula for small pills was made up ½ ounce short to the pound and an allowance of dusting powder of an equal amount was made for each pound and we found that our formulas came out within a very few pills of the calculated amount. The wider variations which had been discovered we found to be due to the careless use of powder by some of the girls, who would use their dusting powder in a very lavish manner.

I have explained this incident at length as illustrative of the troubles against which the most honest manufacturers will occasionally run and let me say, to the credit of the firm mentioned, that, instantly, on the discovery of this fault in their goods, all orders for small pills were cancelled until such a time as they could be filled with genuine goods and that all the goods on hand were thrown out and as much as possible of outstanding stock in the hands of wholesale houses was called in.

I notice in a recent issue of The Journal an account[1] of analysis of tablets containing phenol and that all were deficient—and why should they not be? It is not good sense to put volatile substances into pills and tablets and expect the full amount to remain, especially in pills, which have to be dried, somewhat, before coating and must of necessity lose a great part of all volatile ingredients before being coated.

E. B. Patterson, M.D., Sandpoint, Ida.

Editorial Note: Dr. Patterson's letter will be read with interest by all who believe in scientific prescribing. It bears out exactly what has been said several times in The Journal. We have never accused "reputable manufacturers" of intentionally defrauding their customers by failing to put into their tablets the advertised ingredients. We have more than once stated that the discrepancies which have been found between the real composition of tablets and their advertised composition is due to attempts to achieve what is pharmaceutically impossible rather than to any studied attempt to defraud. Dr. Patterson says: "Many substances are put in tablet and pill form which never should be exhibited in this manner;" in expressing an opinion on the same point The Journal stated editorially as recently as May 6 of this year: "It is pharmaceutically impossible—or at least commercially impracticable—to manufacture, in tablet form, some of the combinations that are listed in the manufacturer's catalogues." The criticism that The Journal makes against manufacturers in this matter is, that in spite of the fact that the Association chemists have repeatedly shown that it is impossible to put up certain drug combinations in tablet form, the manufacturers persist in marketing such tablets. Dr. Patterson is eminently correct when he says: "It is not good sense to put volatile substances into pills and tablets and expect the full amount to remain." Yet this lack of sense is shown by most of the large pharmaceutical houses.

It is pleasing to learn that the firm for which Dr. Patterson worked cancelled its orders and called in out-standing stock as soon as it discovered that its tablets were not true to label. This, as our correspondent says, was some years ago. Apparently a different attitude is taken to-day. This same firm—with several others—when shown over two years ago that its bismuth, opium and phenol tablets were not what they were claimed to be, made no effort, apparently, either to withdraw its product, cease manufacturing it, or even modify the labels to conform to the facts. It was for this reason that this manufacturer—with others—was criticized by The Journal.

In thinking over the details of tablet making, described by Dr. Patterson, one is led far afield. Many of the complex tablet mixtures on the market to-day put out by various firms have but a small sale. They are only made to meet competition between manufacturers. In the hundreds of combinations that exist, one wonders how many really contain the true proportions of the drugs ascribed to them and can therefore be prescribed with any degree of scientific accuracy. All of which leads back to the proposition repeatedly advanced in these pages: Simplicity in prescribing is essential to scientific accuracy.

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[1] Puckner, W. A., and Hilpert, W. S.: Tablets of Bismuth, Opium and Phenol, The Journal A. M. A., May 6, 1911.

Correspondence

Reprints and Journals Wanted

To the Editor:—The Medical Library Association is particularly anxious to find the following reprints and journals:

Any numbers of the *American Journal of Medical Sciences* previous to 1882 and after 1899.
Medical and Surgical Reports of the Boston City Hospital, Vols. VII, VIII, XVI and later.
Proceedings of the Philadelphia Pathological Society, Vol. XII, except Nos. 1 and 3, Vol. XIII, except Nos. 2 and 4.
Pearce, R. M.: The General Infections and Complications and Scarlet Fever; 1898.
Harrington, Charles, and Pearce, R. M.: Formaldehyd as a Practical Disinfectant and an Aid in the Practice of Surgery, 1898.
Pearce, R. M.: Scarlet Fever, Its Bacteriology, Gross and Minute Anatomy, 1899.
Harrington, Charles, and Pearce, R. M.: Proprietary Domestic Disinfectants, a Bacteriological Study, 1899.
Councilman, W. T., Mallory, F. B., and Pearce, R. M.: A Study of the Bacteriology and Pathology of 220 Fatal Cases of Diphtheria, 1900.
Musser, J. H., Gwyn, N., and Pearce, R. M.: Abscess of the Brain Due to a Streptothrix.

John Ruhräh, Treasurer, Medical Library Association.

1211 Cathedral Street, Baltimore.

The Contaminated Fly

To the Editor:—While we all realize the part played by common house-flies in carrying infection, perhaps we have not fully understood their capacity to act as incubators and storehouses for specific bacilli. I practice in a healthy town of 3,000 inhabitants where cases of typhoid are not numerous; they always appear sporadically—never to the extent of an epidemic. These cases usually appear in neighborhoods in which the drinking-water is obtained from rather shallow wells, and for this reason the appearance of an occasional case of typhoid fever has always been attributed to a contaminated water-supply. These neighborhoods usually have many flies, and no systematic effort is made to exclude them from the houses. During the latter part of the summer of 1910 a man died from typhoid fever in one of the localities I speak of. A visitor, who called to see the sick man before he died, afterward told me that she saw a bed-pan containing one of the patient's typhoid stools in the back yard with hundreds of flies about it. Every one of those flies would probably go away loaded with typhoid bacilli. There are always enough flies that find some warm crack or crevice in which to hibernate through the winter to renew the supply the next spring. Many of them must go into winter quarters loaded with bacilli; and the favorable surroundings that would enable the fly to live over winter would enable the bacilli to retain their vitality also. In communities like ours where health conditions are usually good my observations have made me believe that the fly is to be regarded with far more suspicion than the water-supply.

William M. Gregory, Berea, Ohio.

Magnesium Sulphate Treatment of Dysentery

To the Editor:—On the first appearance of mucus and blood in the stools the patient with dysentery should be put to bed and kept there till the stools are free from blood and mucus and the patient free from pain. Liquid diet should be given and the patient should not be allowed to sit up. When the patent is first put to bed he should be given an enema of a quart of warm water that has been boiled, to which two heaping tablespoonfuls of magnesium sulphate have been added and thoroughly dissolved. This should be introduced into the lower colon by means of a fountain syringe with the regular hard rubber rectal tip that comes with the syringe; a rectal or colon tube should never be used, for it wounds the inflamed surfaces. The enema should be repeated every four hours until the actions are free from blood and mucus and the patient free from pain. The patient should be urged to retain the enema each time as long as possible before expelling it, for the longer it is retained the better, as it reduces pain and inflammation. In addition the patient should take the following:

℞	gm. or c.c.		
Magnesium sulphate	45	or	℥iss
Aromatic sulphuric acid	15		℥ss
Deodorized tincture of opium	8		ʒii
Distilled water to make	180		℥vi

M. Shake and take two teaspoonfuls in water every two hours till actions are free from blood and mucus and patient free from pain, then less frequently, as indicated; but give an occasional dose for twenty-four to forty-eight hours.

For children the enema should be the same as for adults and the syringe and tip the same. The child should be placed on its back in its mother's or a nurse's lap with newspapers under it so that the water will flow into a basin when the bowel gets full. The tip should not be removed, but the water should be allowed to pass out by it when the child strains, the water flowing into the colon all the while till all the quart is used, and then repeated as in the adult. A child two or three years old should be given 10 or 15 grains of magnesium sulphate, half a drop to two drops tincture opium and two or three drops aromatic sulphuric acid every two hours till feces are free from blood and mucus and the child free from pain.

Patients should never be allowed to sit up until all symptoms have disappeared.

This treatment has given me good and prompt results.

A. A. Barge, M.D., Newnan, Ga.

Queries and Minor Notes

Anonymous Communications will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

SULPHUR REACTION IN THE URINE OF CANCER PATIENTS

To the Editor:—In The Journal, May 6, page 1371, is an abstract of an article by Salomon and Saxl in the *Wiener klinische Wochenschrift*, 1911, No. 13, page 449. Please give me the technic of this sulphur reaction in the urine of cancer patients.

W. D. Robbins, Chicago Heights, Ill.

Answer.—For this reaction, dilute 150 c.c. of urine with 100 c.c. distilled water (albuminous urine must first be boiled, treated with a small quantity of acetic acid and carefully filtered); then add 150 c.c. Salkowsky's barium solution (a mixture of 2 parts barium hydroxid solution, saturated at room temperature, with 1 part barium chlorid solution saturated at room temperature). Filter and to the clear filtrate add more reagent to insure complete precipitation. Then the ethereal sulphates are removed from the entire filtrate, by adding 30 c.c. hydrochloric acid (sp. gr. 1.12), transferring to a 500 c.c. flask, covering with a small funnel and heated to boiling on an asbestos mat, with a small flame for an hour. The flask is then covered with a beaker and allowed to stand on a water bath till the supernatant liquid is clear (requiring from four to twenty-four hours). Now filter twice through a double "barium filter," small; wash the flask with sodium hydroxid solution and distilled water; boil again, using same precautions as above, and filter through a double "barium filter." (If there is still more precipitate formed, place the flask on the water bath again.) Now treat 200 c.c. of the filtrate with 3 c.c. strong hydrogen peroxid solution (perhydrol Merck) and boil fifteen minutes, covering again with the funnel, in the same flask. Now the liquid is poured into a sedimentation glass and then observed in from one-half to four hours. In cases of carcinoma a decided sediment will be observed while a normal urine may show a trace of such a sediment; as a rule normal urine does not show a sediment in four hours—but some time later a trace of ethereal sulphate not properly removed as above may show. The sediment obtained in case of carcinoma is usually somewhat colored, but this color can be removed by alcohol-ether.

LITERATURE ON RATTLESNAKE POISONING

To the Editor:—Please give me literature on rattlesnake poisoning, particularly on the pathology and treatment.

J. M. Walsh, Fort Pierre, S. D.

Answer.—The following references may be consulted:

Rogers, L.: Snake Bite Treated by Incision and Application of Permanganate of Potash, *Indian Med. Gaz.*, October, 1905; abstr. in The Journal, Dec. 9, 1905, p. 1830.
Ferguson, A. D.: Adrenalin Chlorid in the Treatment of Rattlesnake Bite, *Texas Med. News*, November, 1906.
Haw, W. H.: Two Cases of Snake-Bite with Suggestion for Treatment, *Lancet*, London, April 27, 1907; abstr. in The Journal, May 25, 1907, p. 1819.
Baier, F. C.: Rattlesnake Bite, with Recovery, *Northwest Lancet*, June 15, 1907.
Braddock, C. S.: Treatment of Snake Bites as Seen in the Jungle, *New York Med. Jour.*, Nov. 8, 1907; abstr. in The Journal, Nov. 23, 1907, p. 1803.

Willson, P.: Snake Poisoning in the United States, *Arch. Int. Med.*, June, 1908; discussed editorially in THE JOURNAL, July 11, 1908, p. 132.
White, C. S.: Case of Poisoning from the Bite of a Rattlesnake, THE JOURNAL, May 8, 1909.
Lyon, W. C.: Venomous Snakes of the United States, *Mil. Surg.*, October, 1910.

AVERAGE NUMBER OF TUBERCLE BACILLI DISCHARGED

To the Editor:—What is the number of tubercle bacilli which the average patient with a well-developed tuberculosis is supposed to discharge during the twenty-four hours? Please refer me to the original articles from which *you have secured these figures.*

D. V. S.

ANSWER.—Nuttall (in the *Bulletin of the Johns Hopkins Hospital*, May-June, 1891) estimated the number of tubercle bacilli in the sputum of three patients in the moderately advanced stage by a special technic fully described. He counted the number of tubercle bacilli in a drop obtained from sputum which had been homogenized. In the first case sixteen counts were made from January 10 to March 1; the quantity of *sputum varied from* 43 c.c. to 73 c.c., the number of bacilli present varying from 4,312,581,000 down to 1,695,184,000. In the second case, in which the sputum was very much less, *varying in quantity from* 1 to 10 c.c., the number of bacilli varied *from* 275,000 to 283,457,000. In the third case, the quantity of sputum varied from 10 to 60 c.c. *and* the number *of bacilli* varied from 12,996,000 to 70,474,000. During the observations *the patients* improved and it is interesting to note that the number of tubercle bacilli decreased. *Many of the bacilli* were unquestionably dead.

ANAPHYLAXIS AND SERUM TREATMENT

To the Editor:—Please answer the following questions:

1. May a person in whom horse-serum has been used develop symptoms of anaphylaxis if he is injected with *the serum* of an *animal of a* different species?

2. Can antitoxic globulin (antidiphtheric globulin) be used without fear of anaphylaxis?

E. WISLOCKI, San José, Cal.

ment, the best [illegible] substance producing the symptoms

ANSWER.—1. No. The [illegible] pharmaceutical [illegible] and therefore of anaphylaxis has been shown to be specific [illegible] and the [illegible] will not cause the reaction if an albumin, different from that originally used, is injected.

2. Anaphylactic symptoms are not so likely to develop after the use of antidiphtheric globulin, because less protein is used. So far as we know, however, there is no reason to suppose that anaphylaxis may not occur.

SOURCES OF WATER-SUPPLIES

To the Editor:—Please tell me if you know of any list published that gives the sources of the water-supplies of the principal cities and towns of the United States and Canada.

MORGAN WALCOTT, Tompkinsville, N. Y.

ANSWER.—You will find much information in "Clean Water and How to Get It," by Allen Hazen, published by John Wiley and Son. So far as we are aware, no complete list has been published. The purification of water for domestic use in America was discussed in the *Transactions of the American Society of Civil Engineers,* 1905, liv, Part D.

MEDICOLEGAL ASPECTS OF A FATAL GUNSHOT WOUND

To the Editor:—As a matter of interest from its medicolegal aspect, I would invite an expression of opinion on the following case of homicide by gunshot:

I was called to examine the body of a miner found dead in his cabin, and found the following external injuries: a bullet wound an inch from the right scapular border, at the level of the fourth rib, and another at the lower angle of the left anterior lumbar area. Both had the appearance of entrance wounds and were clean cut without eversion of tissue. There was no indication of scorching, nor were powder grains found on the clothing over the wounds after careful *examination*. The body was found lying on the back, *crosswise of a bed, and underneath it*, near the wound in the back, was found a 32-caliber revolver bullet; later identified as being from the gun proved to have been used in the case. Autopsy findings showed the course of the bullet to be as follows: the lower border of the fourth rib was struck, showing inversion of fragments; the bullet then punctured the upper lobe of right lung and passed through the lower lobe of the left lung and the small intestine at its upper portion. Death was due to excessive pulmonary *hemorrhage.*

Evidence at the coroner's inquest showed only one shot to have been fired, which was heard by several people. I testified that in my opinion the bullet entered the back and could have taken the course described, by its *deflection* downward from contact with the lower border of the fourth *rib*, and emerged low *down* in the abdominal wall *on* the left side. The guilty person later, after being arrested, confessed to having fired the shot, but made a plea of *self-defense* on the grounds that the deceased had him "down on his back and was going after a knife," and that he (the accused) "shot him in the belly."

The point in question is that the plea of self-defense hinges on my *testimony that the entrance wound* was *at* the back, and that the course of the bullet, as shown at autopsy, was not possible if fired from in front

H. C. M.

The Public Service

Medical Department, U. S. Army

Changes for the week ended May 20, 1911.

Beatty, Theodore B., C.S., entered into contract *for duty* at Fort Douglas, Utah.

Bushnell, George E., lieut.-col., detailed *to represent* the Army at the seventh *international* congress against tuberculosis, to be held at Rome, Italy, September 24 to 30, 1911.

Hill, Eben C., lieut., granted six months' leave of absence on account of sickness.

Reynolds, F. P., Straub, Paul F., Munson, Edward L., majors, and Thomason, Henry D., captain, are detailed as instructors at the *encampment of the sanitary* troops, Ohio National Guard, *to be* held at Coshocton, Ohio, June 24, *1911.*

Reynolds, Charles R., major, is detailed for duty at the encampment, Ohio *National* Guard, Coshocton, in the event that Major Straub shall not return to this city prior to June 24, 1911.

Graham, George D., D.S., *orders* relieving him from duty at Fort Shafter, H. T., and directing him to proceed to the Philippine Islands, is revoked.

Wolven, F. H., D.S., left Vancouver Barracks, Wash., *for duty* at posts in Alaska.

Maus, Louis M., colonel, left headquarters, *department* of the lakes, Chicago, Ill., on twelve days' leave of absence.

Purnell, Harry S., captain, granted *ten days' leave* of absence.

Medical Corps, U. S. Navy

Changes during the week ended May 20, 1911.

Boyd, J. C., medical director, detached from duty as a member of the *naval retiring board, Washington, D. C.*, and ordered home.

Heneberger, L. G., medical *director*, detached from command of the Naval Medical School *Hospital*, Washington, D. C., and ordered to duty as a member of the naval retiring board, Washington, D. C.

Bertolette, D. N., medical *director*, detached from duty as president of the naval examining board and board of medical examiners and ordered to command the Naval Medical School *Hospital*, Washington, D. C.

Gardner, *J. E., medical* inspector, detached from the marine recruiting station, Boston, and ordered *to duty as member* of the *naval* examining *board* and board of medical examiners, Washington, D. C.

Payne, J. H., A. A. surgeon, ordered to the marine recruiting station, Boston.

Devalin, C. M., surgeon, detached from the Navy recruiting station, *Detroit*, and ordered to the navy recruiting station, New York.

Thompson, E., surgeon, detached from the Navy yard, Charleston, S. C., *and* ordered to duty in connection with fitting out the *Maine* and to duty on board that vessel when *placed* in commission.

Koltes, F. X., P. A. surgeon, ordered to the Navy recruiting station, Detroit.

Stuart, M. A., P. A. *surgeon*, detached from duty in the Panama Canal Zone and ordered to the Navy yard, Charleston, S. C.

Rossiter, P. S., P. A. surgeon, detached from the *Independence* and ordered to command the naval hospital, Mare Island, Cal.

U. S. Public Health and Marine-Hospital Service

Changes for *the seven* days ended May 17, 1911.

Brooks, S. D., surgeon, granted seven days' leave of absence from May 17, 1911.

White, J. H., surgeon, detailed to *represent* the service at the annual meeting of the American Society of Tropical Medicine to be held at New Orleans, May 18-19, 1911.

Wertenbaker, C. P., surgeon, *detailed* to represent the service at the annual *meeting* of the *Association* of *Surgeons* of the *Southern* Railway Company to be held at Charlotte, N. C., May 29-31, 1911.

Nydegger, J. A., surgeon, granted one month's leave of absence from April 24, 1911, on account of sickness.

Lavinder, C. H., P. A. surgeon, relieved from duty at the hygienic laboratory and directed to proceed to Savannah, Ga., and assume command of the service.

McMullan, John, P. A. surgeon, relieved from duty at Ellis Island, N. Y., and directed to proceed to Baltimore and report to Surgeon W. P. McIntosh for duty in the medical examination of arriving aliens. Granted twenty-one days' leave of absence from May 9, 1911, on account of sickness.

Willie, C. W., P. A. surgeon, detailed to attend meeting *of the* National Dental Association at Cleveland, Ohio, May 10, 1911.

McClintic, T. B., P. A. surgeon, directed to proceed to Missoula, Mont., *via Helena, for the investigation* of Rocky Mountain fever.

Creel, R. H., P. A. surgeon, granted thirty days' leave of absence from June 1, 1911.

Jackson, J. M., Jr., A. A. surgeon, granted ten days' leave of absence from May 12, 1911.

Miranda, R. U. Lange, A. A. surgeon, granted six months' leave of absence from June 3, 1911, without pay.

Ransom, Stacey A., A. A. surgeon, granted thirty days' *leave of* absence from April 1, 1911, with pay, and six months, *without pay,* from May 1, 1911.

Robinson, H. D., A. A. surgeon, granted nine days' *leave of* absence from May 17, 1911.

Board of medical officers convened to meet at Stapleton, N. Y., May 17, 1911, *for the* examination of an officer of the Revenue-Cutter Service, to determine his fitness for promotion. Detail for the board: Surgeon H. W. Austin, chairman; *Passed Assistant* Surgeon W. A. Korn, recorder.

Medical Economics

This Department Embodies the Subjects of Post-Graduate Work, Contract Practice, Legislation, Medical Defense, and Other Medicolegal and Economic Questions of Interest to Physicians

DIVISION OF FEES

Report of the Committee of the Columbus Academy of Medicine

The committee appointed by the Academy of Medicine to investigate the matter of alleged division of fees between physicians and specialists, reports as follows:

1. Careful investigation shows conclusively that there has been relatively very little of this division of fees in Columbus, and that the accounts of such division have been grossly exaggerated in the public prints. We realize, however, that such a practice, even by a small minority, may in time corrupt the whole body of the profession. The truth does not justify the wide aspersion which has been cast on the profession of this city.

2. Secret division of fees between specialists and general practitioners constitutes clearly a grave breach of the ethics of our profession. Its inevitable tendency is to lead thoughtless or unscrupulous physicians to refer their patients to specialists who offer the largest commission, rather than to those who render the best service. Such practice is admittedly unprofessional, and should be condemned in the strongest terms.

3. The causes of this condition are to be found largely in the great overcrowding of the profession, and in the multiplicity of specialists, and the remedy to reach this part of the evil is to diminish largely the number of physicians by increasing the requirements for admission to the profession, and to reduce the number of specialists by such legislation as will require a specialist, before posing as such, to pass special examinations to demonstrate his fitness and qualifications for the specialty which he proposes to enter. In the meantime, and while these reforms are pending, the evil must be firmly met by exposure of those who resort to these dishonest practices, by their expulsion from college organizations and from our medical societies, and by their exclusion from our hospitals.

4. The general practitioner has for several generations been in the habit of charging per visit instead of for services rendered. The profession of medicine is by its nature a conservative one, and changes its methods slowly. As one of the results, our system of charging has remained substantially the same; but this system is clearly unjust both to the physician and to his patients, and is a potent factor in the production of the division of fees. This also accounts very largely for the low estimate which the physician has seemed to place on the value of his services, and their estimate in the eyes of the laity. The patient has thus failed entirely to appreciate the particular service which his physician renders him in furnishing the specialist with the history and symptoms of the case, and he is therefore not prepared to receive a separate and appropriate charge for that service.

It is the duty of the Academy of Medicine to educate the unthinking public to appreciation of the fact that it takes, for illustration, more skill and a finer quality of judgment to carry a patient through months of critical expectancy to a successful accouchement than to amputate a leg, and that the physician should be paid accordingly. Until physicians demand fees in some proportion to services rendered, and without fixed rates, they will never be paid for what they do. "The dead-level fee—the same charge for everybody, for all kinds of cases—should have no place in medicine."

5. Until the public is so educated, however, we recommend as wise and proper in many instances, and most satisfactory to all concerned, the joint rendering of bills by each consultant in cases in which joint services have been rendered by the attending physician and specialist, with the distinct understanding that the factor of the former in these joint bills does not constitute a part of his regular family attendance, but is to be settled as a special service, so that both he and the specialist will be fairly and honorably remunerated for the value of services rendered. "The laborer is worthy of his hire," and should ask and receive neither more nor less than he has justly earned.

6. We commend the attitude taken by the Starling-Ohio Medical College in this matter, and we recommend the adoption of such by-laws by this academy as will render secret fee-splitting, no matter by what subterfuge, a cause for expulsion. We also recommend that officials in charge of our local hospitals adopt such rules as will debar from attendance at their hospitals, any physician or specialist found guilty of this offence.

HEALTH LEGISLATION IN ARKANSAS

The public health bill prepared by the Arkansas Medical Society has passed both houses of the legislature and is ready for the signature of the governor. This bill creates a department of health consisting of an advisory board of seven members and a commissioner of health appointed by the board. The members of the advisory board are to be appointed from the three schools of medicine. The commissioner is to receive a salary of $2,500 per annum. Members of the board are to receive a per-diem allowance of $5.00 and actual traveling expenses.

The board is given the power to make all necessary rules and regulations for the protection of the health of the people, which rules and regulations when promulgated are to have the force of statutory enactments. A hygienic laboratory and a bureau of vital statistics are also provided for. The model vital statistics bill of the American Medical Association is incorporated in the bill.

A bill has also passed both houses, authorizing the state to take over the two medical schools in Little Rock, namely, the Medical College of the University of Arkansas and the College of Physicians and Surgeons. These schools have agreed to turn over to the board of trustees of the State University all of their assets. The trustees of the State University will select a new faculty.

The passage of these two bills insures a single medical school of high grade for Arkansas and also establishes a health department capable of great service to the people. The adoption of the model bill for vital statistics as a part of the public health bill gives Arkansas the honor of being the first southern state to make adequate provision for the collection and recording of vital statistics. The people of the state are to be congratulated on having a legislature which is sufficiently broad-minded and progressive to enact such laws.

Qualifications of Native Chinese Physicians.—The following interesting quotation regarding Chinese physicians is taken from Jefferys and Maxwell's book, "Diseases of China":

"To become a physician a Chinese states to his friends and neighbors, 'I am a physician.' This is the limit of required preparation, although it is usually a development from a former apprenticeship. His diploma is the more or less handsome signboard which announces his determination to the neighborhood. The man whose father or uncle was a physician before him has the supposed advantage of inherited recipes and secret family remedies, and the farther back the medical ancestry the better. Main of Hongchow says: 'Native doctors do not know much and have forgotten much of the little they ever knew, and they are forever pouring drugs, of which they know little, into bodies of which they know less, and think nothing of putting a rusty needle into a patient's abdomen or clipping off an old-standing opacity of the cornea and sticking a dirty needle into an opaque lens in order to improve the sight!' The Chinese physician is usually a middle-aged man of dignified bearing, and his personality has much to do with his success. In the matter of ethics he has not much to boast of. He never does any earthly thing for anybody unless there is money in it, and he makes his deal in advance—so much down and so much guaranteed in case of cure. If he ever comes across a happy discovery, he buries it deep in his heart, strictly for personal private use. . . . He places the patient opposite his august self and begins and ends by feeling his various pulses two at a time. On the condition of the pulses depends much. It is customary to ask a few questions and listen to the patient's own story. He then writes a prescription for first, second or third rate medicine, according to the ability of the buyer. It is probable that a medical visitation is never completed without the administration of one or more drugs. No patient would be satisfied without them."

Medical Education and State Boards of Registration

COMING EXAMINATIONS

Delaware: State Society and Homeopathic, Dover and Wilmington, June 20. Secretary of the Medical Council, Dr. H. W. Briggs, Wilmington.

Illinois: Coliseum Annex, Chicago, June 13-15. Sec., Dr. James A. Egan, Springfield.

Iowa: Capitol Bldg., Des Moines, June 5-7. Sec., Dr. Guilford H. *Sumner*.

Kansas: Hotel Grund, Kansas City, June 13. Sec., Dr. H. A. Dykes, Lebanon.

Kentucky: The Armory, Louisville, May 31. Sec., Dr. J. N. McCormack, Bowling Green.

Maryland: 1211 Cathedral St., Baltimore, June 20. Sec., Dr. J. *McPherson Scott*, Hagerstown.

Michigan: University Bldg., *Ann Arbor*, June 13. Sec., Dr. B. D. Harison, 504 Washington Arcade, Detroit.

Minnesota: State University, *Minneapolis*, *June 20*. Sec., Dr. W. S. Fullerton, 214 American National Bank Bldg., St. Paul.

Missouri: Gymnasium of *St. Louis University*, *St. Louis*, *June* 12-14. Sec., Dr. Frank B. Hiller, State House, Jefferson City.

New Jersey: Capitol Bldg., Trenton, June 20-21. Sec., Dr. H. G. Norton.

New York: June 27-30. Mr. Harlan H. Horner, Chief of Exam*inations Division. Department of Education, Albany.*

North Carolina: Charlotte, June 14. Sec., Dr. Benjamin K. Hays, Oxford.

Ohio: Columbus, June 6-8. Sec., Dr. George H. Matson, State House.

Pennsylvania: Regular, Homeopathic and Eclectic, Philadelphia and Pittsburg, June 27-30. Secretary of the Medical Council, Mr. *Nathan C. Schaeffer*, Harrisburg.

South Carolina: State House, Columbia, June 13. Sec., Dr. A. Earle Boozer.

Texas: Austin, June 27-29. Sec., Dr. J. D. Mitchell, Fort Worth.

Virginia: Richmond, June 20-23. Sec., Dr. R. S. Martin, Stuart.

Wyoming: University of Wyoming, Laramie, June 6-8. Sec., Dr. J. B. Tyrrell.

Arizona January Report

Dr. Ancil Martin, secretary of the Board of Medical Examiners of *Arizona*, reports the written examination held at Phoenix, January 3-4, 1911. The number of subjects examined in was 9; total number of questions asked, 90; percentage required to pass, 75. The total *number* of candidates examined was 9, of whom 5 passed and 4 failed. The following colleges were represented:

PASSED College	Year *Grad.*	Per *Cent.*
University of Southern California	(1909)	83.4
Northwestern University Med. School..(1901) 75;	(1902)	79.6
University and Bellevue Hospital Medical College	(1910)	84.4
Starling Medical College	(1905)	77.5
FAILED		
State University of Iowa, College of Medicine	(1910)	73.1
College of Physicians and Surgeons, Keokuk	(1900)	72
Michigan College of Medicine and Surgery	(1902)	60.3
Washington University, St. Louis	(1903)	71

Colorado April Report

Dr. S. D. Van Meter, secretary of the Colorado State Board of Medical Examiners, reports the written and oral *examination* held at Denver, April 4, 1911. The number of subjects examined in was 8; total number of questions asked, 80; percentage required to pass, 75. Ten candidates were examined, of whom 7 passed, including one osteopath, and 3 failed. Thirty-one candidates were registered on presentation of satisfactory credentials, including state licenses. The following colleges were represented:

PASSED College	Year Grad.	Per Cent.
Denver and Gross College of Medicine	(1910)	90.7
University of Colorado	(1911)*	84.2, 85, 85.2
Kansas City Hahnemann Medical College	(1910)	75.2
University of Toronto, Ontario	*(1909)*	78.2
FAILED		
Kentucky School of Medicine	(1898)	56.5
Barnes Medical College	*(1907)*	65.5
Medico-Chirurgical College of Kansas City	(1901)	62.6

LICENSED ON PRESENTATION OF SATISFACTORY CREDENTIALS *College*	Year Grad.	State *Licenses*
University of Southern California	(1909)	*California*
George Washington University	(1905) (1906)	Dist. Colum.
College of Physicians and Surgeons, Chicago	(1906)	Illinois
Rush Medical College	(1886)	S. Dakota
Chicago Homeopathic College	(1895)	Wisconsin
Hahnemann Med. College and Hospital, Chicago	(1885)	Iowa
Northwestern University Medical School	(1903)	Iowa
Chicago Medical College	(1875)	Kansas
University of Iowa, College of Medicine	(1897)	Wisconsin
University of Iowa, College of Homeo. Medicine	(1893)	Michigan
University of Louisville......(1883) Oklahoma;	(1904)	Kentucky
Tulane University of Louisiana	(1907)	Mississippi
College of Physicians and Surgeons, Baltimore	(1904)	W. Virginia
University of Maryland	*(1903)*	Nevada
Harvard University Medical School	*(1895)*	*Wisconsin*
Missouri Medical College.......(1878) Illinois;	(1895)	Kansas
American Medical College, St. Louis	(1905)	*Missouri*
Homeopathic Medical College of Missouri	(1908)	Missouri
Long Island College Hospital	(1899)	*New York*
Albany Medical College.....(1861) Mississippi;	(1891)	New York
University and Bellevue Hospital Med. College	(2, 1906)	New York
Western Pennsylvania Medical College	(1888)	Penna.
Meharry Medical College	*(1904)*	Oklahoma
[illegible] s	(1905)	Texas
[illegible] *nont*	*(1880)*	Vermont
[illegible] Kingston, Ontario	*(1893)*	*Indiana*

* These three applicants will be *graduated* in June, but took examinations in April. Licenses will not be issued until July *meeting*.

Rhode Island April Report

Dr. Gardner T. Swarts, secretary of the Rhode Island State Board of Health, reports the written *examination* held at *Providence, April 6-7, 1911*. The number of subjects examined in was 7; total number of questions asked, 70; percentage required to pass, 80. The *total number of candidates* examined was 4, of whom 2 passed and 2 failed. The following colleges were represented:

PASSED *College*	Year Grad.	Per Cent.
Harvard University Medical School	(1910)	87.5
University of Michigan, *Dept. of Med. and Surg.*	(1907)	87.7
FAILED		
Baltimore Medical College	(1909)	76.5
University of Vermont	(1910)	72

West Virginia April Report

Dr. *H. A. Barbee, secretary of the* State Board of Health of West Virginia, reports the written *examination held* at Huntington, April 10-12, 1911. The number of subjects examined in was 20; total number of questions asked, 120; percentage required to pass, 80. The total number of candidates examined was 24, *of* whom 17 passed and 7 failed. The following colleges were represented:

PASSED College	Year Grad.	Per Cent.
Howard University, Washington, D. C.	(1909) 82; (1910) 81	92
George Washington University	(1909)	80
University of Louisville	(1887)	80
Baltimore Medical College	(1894)	82
College of Physicians and Surgeons, Baltimore	(1910)	84
University of Michigan, Dept. of Med. and Surg.	(1900)	87
Western Pennsylvania Medical College	(1896)	83
University of Pennsylvania	(1908) 91; (1909) 87; (1910)	83
University College of Med., Richmond	(1901) 86; (1909)	86
University of Virginia	(1904)	87
Meharry Medical College	(1908)	82
University of Toronto, Ontario	(1910)	86
FAILED		
University of Louisville	(1910)*	
College [illegible] Surgeons, Baltimore	(1910) 69	75
Detroit [illegible]	(1911)	76
Eclectic [illegible] innati	(1910) 76	77
Chattan[illegible]	(1910)	78

* Withdrew after having taken two branches.

The following questions were asked:

ANATOMY AND EMBRYOLOGY

1. Name the bones of the head. Mention the coverings *of the* brain. 2. Give the branches of the *common* iliac artery. 3. Give the boundaries of Scarpa's triangle. 4. Give the blood and nerve supply of the stomach. 5. Describe the *jugular vein* and mention its surgical significance. 6. Give the origin and insertion of the sartorius muscle. 7. Name the divisions of the alimentary tract. 8. Name the ligaments of the knee-joint. 9. Describe the *cervical plexus* of nerves. 10. What is the vitelline membrane?

PHYSIOLOGY AND HISTOLOGY

1. Large intestine: describe it and give function. 2. Heart *sounds: describe them and give* causes. 3. Animal heat: how produced and how regulated? 4. Glycogen: where produced? and give its use. 5. Seventh or facial nerve: give *origin, distribution and* function. 6. Pancreas: describe it and give function. 7. White blood-corpuscles: describe them and give function. 8. What does the *presence* of indican in the urine indicate? 9. Give histology of a human tooth. 10. Describe histology of kidney.

BACTERIOLOGY AND HYGIENE

1. What *is the difference* between an antiseptic and a disinfectant? 2. Give *reasons for* and against vaccination. 3. Name *five* contagious diseases; *name three* infectious diseases. 4. Give four modes of administering antitetanic serum. 5. What is tuberculin? What is its use? 6. What is a fair average death-rate in the country; in towns of 5,000 to 20,000; in large cities? 7. What diseases are propagated by drinking water? 8. Name six preventable diseases. 9. How can malarial districts be made healthy? 10. *How* long does vaccination *last?*

CHEMISTRY AND MEDICAL JURISPRUDENCE

1. Explain the following terms: acid, base, salt, efflorescence and deliquescence. 2. Name three compounds of mercury and give their formulas and uses. 3. What is the chemical name for each of the following: oil of vitriol, sugar of lead, copperas, saltpeter, bluestone, lunar caustic and common salt? 4. Name four gases which are poisonous and four gases which are not poisonous. 5. What are the proteids, the carbodydrates, and fats? Give examples of foods which are rich in each of these constituents. 6. What is the composition of milk? Give its specific gravity. 7. Give tests for sugar and albumin in urine. 8. Differentiate death from carbon monoxid gas and potassium cyanid. 9. What qualifications are required for the legal practice of medicine in West Virginia? 10. Give your views as to capital punishment, methods, etc.

PRACTICE OF MEDICINE AND PEDIATRICS

1. Name possible causes of dropsical conditions of the abdomen and lower extremities. 2. Differentiate renal and hepatic colic. 3. Give the character of the fever course in chronic tuberculosis. 4. What is an exanthematous fever? 5. Give the outlines of the liver as revealed by percussion when the patient is in the recumbent position. 6. Diagnose and treat gastric ulcer. 7. Describe and give treatment of cancer of the stomach. 8. Intestinal worms, their varieties, symptoms and treatment. 9. What is modified milk, how prepared, indications for use? 10. Diagnose and treat cholera infantum.

SURGERY

1. Describe the clinical manifestations of carcinoma of the breast in the early stages. 2. Describe the clinical symptoms of rupture of a middle meningeal artery due to trauma without an external wound. 3. Describe the common forms of anal fistula and their treatment. 4. Give the pathology, symptoms and treatment of a felon. 5. Given a wound of the scalp, what investigation of the wound is necessary? Describe in detail the surgical treatment. 6. What are the symptoms and treatment of a gunshot wound of the kidney? 7. Give and explain the symptoms of a strangulated inguinal hernia. 8. How would you differentiate between a fracture at the neck of the femur without impaction and a dislocation? Give Bryant's and Nelaton's lines for making the measurements. 9. Describe the different avenues through which the urinary bladder in the male may be emptied surgically. 10. What are hemorrhoids, what causes them and how treated? Give palliative treatment and treatment for radical cure.

SPECIAL MEDICINE

1. Define vocal fremitus. Name conditions that increase and diminish this sign. 2. Describe physical signs and make diagnosis of mitral incompetency. 3. Diagnose sudden loss of vision. 4. Diagnose and treat infected wounds of the eye. 5. Describe fully technic of nasal examination. 6. How may the exanthemata affect the nasal mucosa? 7. Discuss the importance of acute laryngitis in constitutional diseases. 8. Name the indications for tracheotomy. Describe operation. 9. Describe technic and give diagnostic value of lumbar puncture. 10. Describe loss of tendon reflexes, exaggeration of same, pathology and diagnostic value.

MATERIA MEDICA AND THERAPEUTICS

1. How do the simple bitters aid digestion? Name one of the most common 2. Purgatives: name two saline, two drastic and two cholagogue, with dose of each. 3. Give mode of applying heat as a remedy, physiologic actions and therapy. 4. Define massage. Give method, physiologic effect and therapy. 5. What are cerebral sedatives? Name four, with indications for use. 6. Pilocarpus: physiologic action and therapy, with dose. 7. Anthelmintics: name four. Dose of each for 6-year-old child. 8. Name three new remedies with use and dose of each. 9. Poultices: how and of what made? Action and uses. 10. Write prescription for diarrhea in adult.

OBSTETRICS AND GYNECOLOGY

1. When would you use forceps, and how? 2. Give the indications for version and detail the operation. 3. What symptoms would lead you to suspect a threatened miscarriage. 4. Name the principal diseases and conditions during pregnancy, said to be caused by that condition. 5. How and how long would you treat a babe apparently dead when born? 6. Describe varicose veins of pregnancy. Give dangers of same. Give treatment. 7. Give the cause, prognosis and treatment of pernicious vomiting of pregnancy. 8. Patient 54 years old—give symptoms of malignancy of the uterus. 9. Define ectopic gestation, name varieties, give diagnosis, prognosis and treatment. 10. Define leukorrhea and give three causes.

MATERIA MEDICA AND THERAPEUTICS (HOMEOPATHIC)

1. What is a medicine? How are homeopathic medicines prepared? 2. Name four medicines whose effects are general on the human organism and give their action. 3. Give examples of four drugs whose effects are comparatively local or single. 4. Mention three or four drugs whose action is chiefly on the brain and spinal marrow. Describe their effects. 5. Name four drugs whose effects are chiefly on the digestive tract and give symptoms. 6. What symptoms are of most importance in making a prescription? 7. differentiate between uranium nitrate and phosphoric acid in diabetes. 8. What symptoms would lead you to prescribe merc. biniod. and in what diseases would you think of it? 9. What are the throat symptoms of apis mel, lachesis and phytolacca? 10. Give the headache of cannabis indica.

PRACTICE OF MEDICINE AND PEDIATRICS (HOMEOPATHIC)

1. Dysentery: etiology, complications and sequelæ; treat. 2. Cirrhosis of liver: etiology, symptoms and treatment. 3. Etiology and treatment of hemoptysis. 4. Rheumatism: give different forms; treat. 5. Intussusception: define, diagnose and treat. 6. Tonsillitis: differentiate from diphtheria; symptoms and treatment. 7. What diseases does meningitis complicate in children? 8. Intestinal catarrh of children: symptoms and treatment. 9. Describe the lumbricoides and give origin, symptoms and treatment. 10. Endocarditis in children: etiology, symptoms and treatment.

PRACTICE OF MEDICINE AND PEDIATRICS (ECLECTIC)

1. Give etiology, symptoms, diagnosis and treatment of chorea. 2. Define empy[illegible] treat. 3. Give etiology, diagnose and treat [illegible] and treat incipient pulmonary tuberculosis. [illegible] e the etiology, symptoms and treatment. 6. What symptoms would lead you to suspect malignant disease of the stomach. 7. Describe symptoms, diagnose and treat infantile spinal paralysis. 8. Discuss meningitis; make diagnosis and give treatment. 9. Describe management of "summer diarrheas" of children. 10. Discuss convulsions in children; give treatment.

MATERIA MEDICA AND THERAPEUTICS (ECLECTIC)

1. Give properties, therapeutic indications and dose of specific gelsemium veratrum. 2. Give the indications for aconite, belladonna, arsenic, nux vomica. 3. Define anodyne, anthelmintic, cholagogue, emmenagogue. Name two drugs of each class, giving dose. 4. Give properties, dose and therapeutic indications for potassium acetate, sodium sulphate, echinacea, bryonia. 5. Discuss physiologic action and therapeutic application of the nitrites. 6. Write a prescription for a stimulating expectorant. 7. Describe the physiologic action and therapeutic use of digitalis. 8. What remedies are usually indicated in acute catarrhal affections of the respiratory tract? 9. Define hemoptysis. How treat? 10. What remedies are commonly indicated in catarrh of the bile passages?

Wisconsin January Report

Dr. John M. Beffel, secretary of the Wisconsin Board of Medical Examiners, reports the written examination held at Milwaukee, Jan. 10-12, 1911. The number of subjects examined in was 21; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 21, of whom 18 passed, including 2 osteopaths, and 3 failed, including 1 osteopath. Twenty-three candidates were licensed through reciprocity, including one osteopath. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
Rush Medical College......(1872) 83; (1896) 86;	(1910)	87
Bennett Medical College...........................	(1911)	82
College of Physicians and Surgeons, Chicago.......	(1910)	85
Northwestern University Medical School (1881) 83;	(1898)	89
Chicago College of Medicine and Surgery..........	(1910)	76
University of Michigan, Dept. of Med. and Surg....	(1910)	84
St. Louis University..............................	(1910)	79
University of Pennsylvania........................	(1908)	87
Marquette University (1910) 75, 76, 80, 80.		
Wisconsin College of Physicians and Surgeons......	(1906)	83

FAILED

College	Year Grad.	Per Cent.
Marquette University	(1910)	69 70

LICENSED THROUGH RECIPROCITY

College	Year Grad.	Reciprocity with
Bennett Medical College...........................	(1894)	Iowa
Rush Medical College.......(1882) Minnesota;	(1902)	Illinois
Chicago College of Medicine and Surgery........	(1908)	Illinois
Illinois Medical College..........................	(1908)	Illinois
College of Physicians and Surgeons, Chicago (1894) Indiana;	(1908)	Illinois.
Hahnemann Medical College and Hospital, Chicago (1901) Iowa; (1907) Illinois;	(1907)	Minnesota.
Northwestern University Medical School........	(1908)	Illinois
Kansas Medical College..........................	(1909)	Kansas
University of Michigan, Homeopathic College....	(1907)	Indiana
Johns Hopkins University.....(1901) Missouri;	(1909)	Maryland
College of Physicians and Surgeons, Baltimore...	(1901)	Maryland
University of Minnesota, College of Medicine....	(1895)	Minnesota
St. Louis University..............................	(1909)	Illinois
University of the City of New York............	(1889)	N. Dakota
University of Nashville..........................	(1909)	Illinois
Trinity Medical College, Ontario................	(1897)	Kansas
University of Leipsig, Germany..................	(1889)	Iowa

Maine March Report

Dr. Frank W. Searle, secretary of the Maine Board of Registration of Medicine, reports the written examination held at Portland, March 14-15, 1911. The number of subjects examined in was 10; total number of questions asked, 90; percentage required to pass, 75. The total number of candidates examined was 19, of whom 15 passed and 4 failed. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
Medical School of Maine...........................	(1909)	89
Baltimore Medical College...........(1906) 88;	(1910)	78 85
Harvard University Medical School................	(1902)	91
College of Phys. and Surgs., Boston..(1909) 75.5;	(1910)	78
Boston University	(1901)	80
Ensworth Medical College..........................	(1903)	76
Dartmouth Medical School.............(1890) 79;	(1910)	90
Long Island Colleg[illegible]	(1910)	83
Bellevue Hospital "	(1885)	78
Medico-Chirurgical	(1908)	90
Jefferson Medical College.........................	(1910)	80

FAILED

College	Year Grad.	Per Cent.
Hahnemann Medical College and Hospital, Chicago..	(1909)	67
University of Maryland..........	(1910)	74
College of Phys. and Surgs., Boston...(1908) 78;*	(1909)	76†

* Fell below 60 in anatomy.
† Fell below 60 in pathology.

Book Notices

ATLAS OF MICROSCOPIC DIAGNOSIS IN GYNECOLOGY. With Preface and Explanatory Text by Dr. Rudolf Jolly, Priv. Doc., Chief Physician of the Gynecologic Clinic, University of Berlin. Only authorized English Translation by P. W. Shedd, M.D., New York. Cloth. Price, $5.50. Pp. 192, with 54 illustrations. New York: Rebman Co., (1911).

An English translation of Dr. Jolly's work on microscopic diagnosis in gynecology is here presented.. It will prove valuable to physicians in general and in particular to those who make their own microscopic examinations without the facilities afforded by well-equipped laboratories. Jolly has confined himself almost exclusively to those specimens which can readily be obtained from curettments, and sections which are accessible to the average physician in order to enable him to make a scientific diagnosis. The plates have lost none of the clearness of outline and coloring that were of such special value in the original work. The clearly defined description in the English text, differentiating between the normal menstrual and premenstrual mucosa, the decidua menstrualis, and the decidua of endometritis, is of much worth to the diagnostician. The exceptional accuracy with which Jolly calls attention to the recognition of early malignancy and the differentiation between benign and malignant growths makes the book valuable to the student and general practitioner.

REPORT OF THE DEPARTMENT OF HEALTH OF THE CITY OF CHICAGO. For the Years 1907, 1908, 1909, 1910. W. A. Evans, M.S., M.D., LL.D., Commissioner of Health. Cloth. Pp. 446. Chicago, 1911.

In his quadrennial report, Dr. William A. Evans, Commissioner of Health of Chicago, submits a summary of the activities of the department with explanatory statements, setting forth the details of the administration of the department, accompanied by articles on the various phases of public health work and suggestions as to the handling of public health problems. With the report are incorporated the reports of the School of Sanitary Instruction, which was incorporated in 1909 and has issued a series of weekly bulletins since that time; the Bureau of Contagious Diseases, the Infant Welfare Service, the Division of Hospital Control, Bureau of Sanitation (which includes the public baths and municipal lodging houses), the Municipal Laboratory, and the Bureau of Food Inspection and Vital Statistics. To this are appended the detailed mortality statistics of Chicago from 1907 to 1909 and a summary for 1910, a chronologic summary of the principal causes of mortality for the forty years from 1871 to 1910, and meteorologic data of Chicago, covering the same period, together with financial statements and departmental rules.

OUTLINES OF PSYCHIATRY. By William A. White, M.D., Washington, D.C. Nervous and Mental Disease Monograph Series No. 1. Third Edition. Paper. Price, $2.50. Pp. 272, with illustrations. New York: The Journal of Nervous and Mental Disease Publishing Co., 1911.

The author modestly calls his production "outlines" of psychiatry, though it deserves the name of text-book. With an easy and attractive style he has succeeded in crowding the substance of modern psychiatry into the insignificant space of 272 pages. We know of no other book of similar size on this subject which is so free from errors of style, etc., and yet so comprehensive in scope. Though it is primarily written for students, the general practitioner also will find its perusal advantageous. The Kraepelinian tendency prevails throughout the book. Nevertheless, theories emanating from other sources are discussed without partiality; consequently the subjects of psycho-analysis and the new psychotherapy are given adequate expression. Of the many excellent chapters the one on "Methods of Examination" deserves particular commendation. In addition, the type is clear, the paper good and the price moderate.

EIGHTH AND NINTH ANNUAL REPORTS OF THE BUREAU OF SCIENCE [MANILA] TO THE HONORABLE, THE SECRETARY OF THE INTERIOR. By Richard P. Strong. For the Years Ending Aug. 1, 1909 and 1910, respectively. Paper. Pp. 62 and 70, respectively. Manila, 1910 and 1911.

These annual reports cover the work of the Bureau of Science of the Philippine Islands from August, 1908, to August, 1910. The report for 1908-09 presents the work of the biologic laboratory in the study of various tropical diseases in Manila and the provinces, among them being dysentery, leprosy, cholera and diphtheria; and the investigations of intestinal parasites and certain diseases in animals. The report also contains other matter not directly connected with zoology or medicine. The report for 1909-10 gives account of the further investigations concerning the diseases above mentioned. It has been the custom of the Bureau of Science in the Philippines to send parties of investigators into one of the provinces and study the diseases and parasites indigenous to that region in a rather intensive manner. This has led to important results and the reports of the work are of great interest.

ANNUAL REPORT OF THE SURGEON-GENERAL OF THE PUBLIC HEALTH AND MARINE-HOSPITAL SERVICE OF THE UNITED STATES. For the Fiscal Year 1910. Cloth. Pp. 256. Washington: Government Printing Office, 1911.

The report of the Surgeon-General of the Public Health and Marine-Hospital Service for 1910 recounts the work of the bureau with especial reference to scientific research and sanitation; the supervision of viruses, serums, toxins and analogous products, including a list of establishments holding licenses for the manufacture, sale and barter of these products; investigations into certain epidemic diseases; studies of disinfectants; relations of the bureau to the pharmacopeia; the compilation of national, state and territorial health laws; and many other of the multifarious duties which are included in the work of the public health service. During the year fifty-one special articles appeared in the weekly *Public Health Report* and 364,306 copies of the various service publications were distributed. The surgeon-general invites attention to certain needs of the service: namely, the necessity of a larger appropriation for printing, additions to the office force, and the passage of a bill containing provisions for the increase of the compensations of the commissioned medical corps and, especially, for officers below the grade of assistant surgeon-general.

HOOKWORM DISEASE. A Handbook of Information for All Who Are Interested. Prepared Under the Direction of the State Board of Health of Florida, by Dr. Hiram Byrd, Assistant State Health Officer. Publication 79. October, 1910. Paper. Pp. 70, with 13 illustrations.

Florida was a pioneer state in the work of ameliorating conditions due to hookworm. For at least seven years systematic work to this end has been conducted by the state on its own hook (no pun), and at present it is not one of the states receiving assistance from the Rockefeller fund. In this brochure (Publication 79) a history of the work in the state is given, together with a description of the worm, its distribution, life cycle, the symptoms of uncinariasis, diagnosis and treatment, and some interesting reflections on the possibility of finally eradicating it, which, according to Health Officer Byrd, is remote. There is also a note on the Rockefeller Commission, and an interesting section on the influence of hookworm on racial development. The pamphlet is an interesting one on a large and important subject.

DISEASES OF CHILDREN FOR NURSES. Including Infant-Feeding, Therapeutic Measures Employed in Childhood, Treatment for Emergencies, Prophylaxis, Hygiene and Nursing. By Robert S. McCombs, M.D., Assistant Physician to the Dispensary and Instructor of Nurses at the Children's Hospital of Philadelphia. Second Edition. Cloth. Price, $2 net. Pp. 470, with 118 illustrations. Philadelphia: W. B. Saunders Co., 1911.

This book, in addition to giving some anatomy and pathology, briefly describes many of the diseases of children so that the nurse may have a sufficient acquaintance with them and the measures employed in treating them to be able to watch intelligently for important symptoms, to take necessary steps in emergencies, and to carry out efficiently the directions of the physician. The book is an elaboration of a course of lectures to nurses. It contains tables of weights and measures, a list of the pharmacopeial preparations commonly used, a list of abbreviations, a glossary of medical terms and an index. It is a clear, simple and well-written book for the nurse, much of whose work is among children.

DISEASES OF THE JOINTS AND SPINE. By Howard Marsh, M.A., M.C., Cantab., F.R.C.S., Master of Downing College and Professor of Surgery in the University of Cambridge. New and Enlarged Edition Thoroughly Revised by the Author and by C. Gordon Watson, F.R.C.S., Surgeon to the Metropolitan Hospital. Price, $3. Cloth. Pp. 672, with 100 Illustrations. Chicago: Chicago Medical Book Co., 1910.

This book, originally published in 1886, has been enlarged and largely rewritten. It contains much which is of interest, but not easily accessible to the general practitioner. The chapter on arthritis treats not only of tuberculosis, but also of syphilitic, gonorrheal, septic, rheumatic and gouty arthritis deformans, Charcot's disease of the joints, and many other joint diseases and disabilities. While the book is written from the standpoint of the general surgeon, by a man of experience, and is of positive value, it contains little or nothing of value on the mechanical treatment of joint diseases.

Personal Hygiene and Physical Training for Women. By Anna M. Galbraith, M.D., Author of "Hygiene and Physical Culture for Women," etc. Cloth. Price, $2 net. Pp. 371, with Illustrations.

This book meets an evident need, for it is complete without being ultrascientific, and, while dealing with the complex relations of women to the demands of modern life, it is free from fads and unsound theories. The aim of the author has been to present the fundamental physiologic laws of personal hygiene as well as practical detailed directions for the proper development and care of the body. The book can be safely recommended to physicians who desire something of this sort to put into the hands of their women patients. It will also be of value to teachers.

Who's Who. 1911. [British.] An Annual Biographic Dictionary. Sixty-Third Year of Issue. Cloth. Price, $2.50 net. Pp. 2246. New York: The Macmillan Co., 1911.

This carefully prepared and relatively complete biographic dictionary of the living deserves much praise. Only those who have had to compile biographies appreciate the difficulties of such work. Modesty, fear, or carelessness causes many men whose names should appear in a work of this kind, and who have been asked for information, to refrain from furnishing it, and, of course, for all such omissions, not the individual, but the compiler or publisher must bear the undeserved blame.

The Medical Directory, 1911. Including the London Medical Directory, The Provincial Medical Directory, the Medical Directory for Wales, Scotland, Ireland, etc. Sixty-Seventh Annual Issue. Cloth. Price, 14 shillings net. Pp. 2128. London: J. & A. Churchill, 7 Great Marlborough Street.

The British medical directory for 1911 contains the names of 40,642 physicians, an increase for the year of 173. These are distributed as follows: London, 6,415; the provinces, 17,721; Wales, 1,336; Scotland, 3,958; Ireland, 2,724; abroad, 5,188, and in the United Services, 3,300. The directory has been prepared in the usual painstaking and exact way, but would, it is believed, be made of much more practical value if a general alphabetical index were added.

The Preservation of Sewage by the Aid of Chloroform and Cold Storage. Dr. Arthur Lederer and Harry B. Hommon. Paper. Pp. 16. Sewage Disposal Investigations, the Sanitary District of Chicago, 1910.

The authors advocate the addition of 10 c.c. of chloroform to 4 liters of sewage, followed by storage at 10° C., as the most effective method yet devised for checking the chemical changes which take place after collecting a sample of sewage. Cold storage alone is shown to be reasonably good, but higher temperatures, even when chloroform is used, are ineffective.

Text-Book of Massage. By L. L. Despard, Member and Examiner Incorporated Society of Trained Masseuses. Cloth. Price, $4 net. Pp. 290, with 204 illustrations. New York: Oxford University Press, 1911.

In this book the anatomy and principles of elementary physiology are well discussed, about half of the book being devoted to this phase of the subject. The various diseases and the movements indicated are described from the point of view of one who desires to cooperate with the attending physician. This is a good text-book for teaching scientific massage.

Memoranda on Poisons. By Thomas Hawkes Tanner, M.D., F.L.S. Eleventh Edition. By Henry Leffmann, A.M., M.D., Professor of Chemistry in the Woman's Medical College of Pennsylvania. Cloth. Price, 75 cents net. Pp. 167. Philadelphia: P. Blakiston's Son & Co., 1911.

Some modifications have been made in this little manual and some additions made, such as the synthetic substitutes for morphin, and information concerning food-poisoning.

A Manual of Physical Diagnosis. By Brefney Ralph O'Reilly, M.D., C.M., Demonstrator in Clinical Medicine and in Pathology, University of Toronto. Cloth. Price, $2 net. Pp. 369, with 49 illustrations. Philadelphia: P. Blakiston's Son & Co., 1911.

This brief book covers in a systematic way the cardinal points in the examination of a patient, not attempting to enter into details minutely. It sets forth a comprehensive scheme for the examination of the patient, and in describing the different diagnostic procedures, is careful always to point out the significance and practical application of the findings. In an appendix are contained laboratory methods for examining the different secretions and excretions, etc., but, except in the case of the urine, which is rather fully treated, and the blood, to which fairly satisfactory consideration is given, the methods are given so briefly as perhaps to be of little practical value. The book is well illustrated and is a good brief work for the student or practitioner.

Medicolegal

Justifiable Prosecution for Illegally Practicing Medicine

The First Appellate Division of the Supreme Court of New York, in Schmidt vs. Medical Society of New York County (127 N. Y. S. 365), an action brought to recover damages for alleged malicious prosecution, reverses a judgment obtained by the plaintiff, and orders a new trial. The court says that it does not see how any person of ordinary intelligence would not have probable cause for believing that the plaintiff was engaged in the practice of medicine when the receipt of letters from the "Department of Glanderine," offering to cure of glanders a certain person in a hospital, the plaintiff's subsequent visits to the hospital, his conduct there, leaving medicine with directions as to its use, and permitting himself to be called a doctor, were considered. These facts, being uncontradicted and unexplained, justified the defendant in instigating his arrest on a charge of practicing medicine without being legally authorized to do so. The trial court should have so held and dismissed the complaint at the close of the plaintiff's case, and, having failed to do so, should have directed a verdict for the defendant at the conclusion of the whole case.

Before the plaintiff could succeed in this case, he had to establish by a fair preponderance of evidence that his prosecution was malicious, in other words, was without probable cause, and that he was acquitted. The trial court in this case was apparently of the opinion that actual guilt and probable cause must concur in order to constitute a defense. This is not the law; probable cause alone being a complete defense. It is not necessary that the accused, in order to justify a prosecution, should appear to be guilty beyond all reasonable doubt. The test as to whether reasonable or not must be applied at the time when the prosecution was commenced.

After a careful consideration of all the evidence adduced at the trial and giving the plaintiff the benefit of every disputed question of fact, the court is of the opinion that he not only failed to prove want of probable cause for the prosecution instigated by the defendant, but, on the contrary, the existence of probable cause was conclusively shown. There was nothing to indicate that the defendant was actuated by malice, or that it had any desire to do otherwise than carry out one of the objects of its incorporation, which was to prevent persons practicing medicine without being authorized to do so by the statutes of the state. It is unnecessary to determine whether the plaintiff was actually engaged in the practice of medicine within the meaning of the statute; it being sufficient for the purposes of this appeal that there was at least probable cause for the defendant's believing that he was doing so.

Manner and Time of Presenting Claim for Services Rendered Poor Person

The Supreme Court of Iowa, in Case vs. Davis County (129 N. W. R. 804) reverses a judgment obtained for medical and surgical services rendered to an alleged poor person, or pauper. As abstract propositions of law, the court says that it thinks that it may be conceded: (1) That in this proceeding the county could not be heard to question the legal residence of the patient in the county, or to deny his necessitous condition at the time the services were rendered; (2) that the plaintiff was not precluded by his act in filing a claim against the estate of the patient, or by the fact that his bill so filed was for a much less amount than was stated in his claim against the county; (3) that, even if the services were originally rendered without the order or sanction of the township trustees, its subsequent certification and approval by those officers cured the defect. But the court does not agree with the view that the presentation of the claim to the trustees and its rejection by them in 1905 were not a bar to its presentation and allowance by their successors in 1908.

The trustees who authorize the service, or have jurisdiction in matters of poor relief at the time the services are rendered and bill presented, constitute a quasi or sort of judicial body for the consideration and allowance or rejection of the claim. Having once acted, if the claimant is not satisfied with the finding, his remedy, as the court views it, is and ought to be by resort to the courts or by direct application to the board of supervisors. To say that, when his claim is rejected, he may await any number of years short of the statutory period of limitations when other trustees who may have no knowledge of the merits of the case have succeeded to the office, and then renew his claim and secure its allowance, would be to open the door to many abuses. The court does not mean by this to say that a board of trustees having once rejected a claim may not within a reasonable time reopen its consideration, and, if so convinced, reach an opposite conclusion.

Then, while the previous order or request of the trustees may not always be necessary as the foundation of a claim against the county for relief furnished the poor, and while the decision of the trustees, acting in good faith, that a person is a proper subject for public aid is not ordinarily reviewable by the board of supervisors; it has never been held, and it would be a most mischevious rule to establish, that a physician, merchant, or other person may, by securing a certificate from a complaisant board of township trustees, make the county his debtor for an uncollectable bill contracted by an impecunious customer or patient. Yet this was substantially what was alleged was done in this case, and, if the proof should bear out the allegation, it ought to be, and the court holds would be, a good defense. To hold otherwise would be to say that the county is helpless to protect itself against gross imposition.

Operating to Recover False Teeth Without Sufficient Justification—X-Ray Experiment Evidence

The Supreme Court of Kansas holds that, in the case of Wingfield vs. McClintock and others (113 Pac. 394), as to two of the defendants, who may be designated as Drs. M. and K., there was evidence that should have been submitted to the determination of the jury, so that a judgment rendered in their favor, on a demurrer to the plaintiff's evidence, is reversed. The action was brought by the plaintiff to recover damages for alleged negligence and unskilfulness of said defendants in performing a surgical operation on her husband, which resulted in his death. He was a farmer who went to bed one night to some extent under the influence of intoxicating liquor, awoke after midnight, and, missing his upper set of false teeth, declared that he had swallowed them. Dr. K. was sent for, examined the throat by inserting his finger and said that he felt the teeth, but that they were in a position that he could not get them. The physician returned to the city; the man and daughter followed him. In the evening an examination was made with an *x*-ray machine, Dr. K. reporting that he saw the teeth, and that the best thing to do would be to go to a hospital at Topeka, where Dr. M. had *x*-ray things in his office, the best in Kansas. The trip was taken, and, without further *x*-ray examination, after Dr. M. declared that he could not feel the teeth with a probe, the surgeons cut into the neck and through the esophagus, and afterward into the stomach, when Dr. M. said, "The teeth are not here. If you will look in the room where he slept last night, you will find them." There was a question for the determination of the jury as to whether the misapprehension of the patient or the failure to exercise care on the part of the surgeons, if there was such failure, was the proximate cause of the operations on the patient.

The court does not consider it necessary to discuss the degree of care and skill legally required of physicians and surgeons, because, if the evidence of the plaintiff be taken as true, as it must be as against a demurrer thereto, the surgeons proceeded to operate on the neck of the patient after they had demonstrated that the teeth were not in the esophagus, and on the stomach, without investigation, when they could have definitely determined whether or not the teeth were there, and without an operation.

Complaint was made that evidence of an *x*-ray shadow picture taken by placing under a dead body a set of false teeth composed of porcelain teeth set in gutta percha, being a view taken from the opposite side of the body, was rejected as evidence in illustration of what might have been disclosed by an *x*-ray examination on the living patient. Evidence of experiments offered as an illustration of a fact in issue, which experiments are taken under widely differing conditions from the facts sought to be illustrated, are not admissible in evidence. It is a matter of common knowledge that the presence of an opaque object in the human body may be discovered by the *x*-ray process, if no other opaque substance intervenes; yet, as the shadow picture may be greatly changed by different positions of the body with reference to the instrument and by other conditions, the introduction should be allowed of such experiment evidence only as clearly appears to be an aid to the jury in determining the fact in issue.

Society Proceedings

COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION, Los Angeles, June 27-30.

American Assn. of Genito-Urinary Surgeons, New York, June 1-3.
American Academy of Medicine, Los Angeles, June 23-26.
American Dermatological Association, Boston, May 25-27.
American Climatological Association, Montreal, Canada, June 13-14.
American Laryn., Rhin. and Otol. Society, Atlantic City, June 1-3.
American Laryngological Association, Philadelphia, May 29-31.
American Medico-Psychological Association, Denver, June 19-20.
American Otological Society, Atlantic City, June 26-27.
American Pediatric Society, Lake Mohonk, May 31-June 2.
American Proctologic Society, Los Angeles, June 26-27.
American Surgical Association, Denver, June 19-21.
Conf. of Bds. of Health of N. America, Los Angeles, June 30-July 1.
Louisiana State Medical Society, Shreveport, May 30-June 1.
Maine Medical Association, Augusta, June 28-29.
Massachusetts Medical Society, Boston, June 13-14.
Nat'l Assn. for Study and Prev. of Tuberculosis, Denver, June 20-21.
National Association for Study of Epilepsy, St. Louis, June 16.
New Jersey, Medical Society of, Spring Lake, June 13-15.
North Carolina, Medical Society of State of, Charlotte, June 20.
Rhode Island Medical Society, Providence, June 1.
Wisconsin, State Medical Society of, Waukesha, June 7-9.

OHIO STATE MEDICAL ASSOCIATION

Annual Meeting, held at Cleveland, May 9-11, 1911

The President, DR. R. E. SKEEL, Cleveland, in the Chair

The list of officers elected was published in THE JOURNAL, May 20, page 1489.

The Commercial Exhibit, in charge of Dr. F. C. Herrick, was restricted, as to proprietaries, to those mentioned in New and Nonofficial Remedies, the book published by the Council on Pharmacy and Chemistry of the American Medical Association. This procedure met with much favorable comment.

The Practice of Medicine

DR. ROBERT E. SKEEL, Cleveland: It is an unfortunate thing that the practice of medicine has never been satisfactorily defined legally, and, therefore, hundreds of individuals are doing those things which medical men recognize as violations of the law, but which the lay mind fails so to discern. To the latter, the practice of medicine is, in a large sense, taken to mean the administration of drugs and the performance of operations, and anything which does not include one of these two acts is regarded as an entirely extra-professional affair. To the medical mind, the practice of medicine means the application of any and all methods which may prevent, alleviate or cure disease, regardless of the means employed; and the profession insists that if the law as it stands be applied to its members, it ought likewise be applied to all others who, under whatever name, are using means to accomplish the same end. General medical education is necessary in order to diagnose disease, to understand its natural evolution and life history and prevent the dissemination of communicable disease in the community. At every session of the legislature, bills are introduced looking to the licensing of individuals practicing on certain portions of the body and permitting them so to practice with lesser qualifications than those demanded of the medical practitioner, while other bills are from time to time introduced providing that certain methods of treatment of the entire body be exempted from the operation of the law. As an example of the first class there is the optometry bill and of the second the prayer cure. Carried out to its logical conclusion, the first would soon split the body into a number of organs, each under the care of an individual who knows little of it and nothing of any other; while the second would place the health of the entire state in the hands of a coterie of sublime egotists, who claim that they and they only have access direct to the Almighty—for a consideration.

It should lie with the authorities to see that each individual practicing is doing so legally. If licensed physicians would announce themselves as such, demanding of the state that it protect the name of physician or doctor from being used by any other than those so licensed, it would put the entire matter up to the people themselves and if they then choose an unlicensed practitioner it would be with their eyes open. Nothing would more quickly cure them of their dislike for expert opinion and sane leadership in sanitary and medical matters than would the undoubtedly disastrous result of a spread of contagion following the mutilation and non-enforcement of present sanitary laws. The average individual to-day has more respect for his own physician and less for the profession as a whole than ever before, for the reason that he knows his physician and what he stands for while he knows nothing of the medical profession and what it stands for. To-day a smattering of medical education is possessed by all but the absolutely ignorant, and medical science has reached a sufficient degree of accuracy so that a frank and open statement of a case is the best policy in private practice, and a similarly frank and free discussion of medical topics is the best public policy. Medical, not general, ignorance is responsible for the flourishing condition of the pathies, cults and crazes of all kinds. Physicians should never hesitate to appear before clubs of all kinds with well-prepared talks on popular medical subjects, where the hearers should be set right on the whole subject of medicine and its activities. While the intelligent portion of the public has a smattering of medical knowledge it is absolutely ignorant of the fundamental principles underlying medical science.

Medical Inspection of Public Schools

Dr. M. Coplan, Cleveland: From an economic and humanitarian point of view, there can be no more valuable service rendered to humanity than in the preservation of the health of the children, and this can be accomplished only through medical inspection in the public schools. Medical inspection should be an important branch of the educational system. In medical inspection the nurse is an important adjunct to the school inspector and to the defective children. It is the practical work of the nurse that has drawn public interest to the medical work in the school and vitalized the hitherto perfunctory routine of medical inspection. School instruction in sex hygiene, if done properly and systematically, is the only remedy and prophylaxis for the existing conditions as regards venereal diseases and the code of morals among classes of society. Children should be taught as carefully in matters pertaining to sex hygiene as in deportment and other branches of elementary and academic studies. The medical inspector and the school nurse can best impart this knowledge and picture the penalties of vice and transgression.

Dr. A. M. Crane, Marion: Sex hygiene should be taught in the schools in separate classes, and by a physician who is capable of approaching these topics in such a manner and using such language as will be understood by boys and girls. Object lessons should be employed, such as lantern slides and microscopic examinations that will demonstrate the evils to be incurred.

Dr. J. M. Rector, Columbus: I wish to advocate instruction in preventive measures, such as are being carried out by the army and the navy and which have here greatly reduced the prevalence of venereal diseases.

Abdominal Pain

Dr. R. H. Grube, Xenia: If Lennander's theory is true, and its corollary, that adhesions are chiefly the result of infantile colitis, the great necessity of preventing and of quickly curing bowel trouble in infants is apparent. While these almost startling views of Lennander have not been unqualifiedly received by the profession, they form a good working hypothesis for the interpretation of abdominal pain.

DISCUSSION

Dr. G. F. Zinninger, Canton: The pain symptom is of great importance, as it is this that most frequently sends the patient to the physician, and without it patients would drift into much more serious stages of disease. No doubt better diagnosis can be secured by carefully analyzing the symptom of pain as it presents itself. I cannot accept the theory of Lennander in its entirety, but it is helpful in correcting some erroneous ideas. The end organs of the abdominal viscera may be different than those on the surface of the body, and we are told that the organs are insensitive to cutting, tearing or burning, but that a ligature around the appendix affords great pain. Cognizance should be taken of conditions in which pain is absent (as in tabes); also in which pain exists in the abdominal cavity while the disease is in some other part of the body, as the abdominal pain in pneumonia. The physical condition of the patient, the history and the symptom of pain should all be considered in forming a diagnosis.

Dr. C. F. Kline, Portsmouth: There is generally an absence of pain where the vagus nerve alone supplies, and it is supposed to not have many sensory fibers, but it is known that there are certain pains produced in the heart.

Dr. R. K. Updegraff, Cleveland: What is green apple colic, or calomel colic, both of which are terminated by belladonna?

Dr. R. H. Grube, Xenia: In people who are subject to these sharp attacks of colic, there are adhesions that have existed from infancy, and only when the intestine is drawn into increased activity by some agent such as calomel, is the pain elicited. Statistics give as high as 30 per cent. of all persons going to autopsy as having these adhesions.

Cardiac Syphilis

Dr. Alfred S. Warthin, Ann Arbor, Mich.: Cardiac syphilis must be regarded at present as the most important factor in the production of heart disease. In the children's department at Ann Arbor, twelve young people died suddenly with symptoms of cardiac insufficiency and without any suspicion of congenital syphilis. These children at autopsy showed nothing that would be attributed by the pathologist to syphilis; but on examination according to the method of Levaditi certain changes were found that have led me to believe that certain forms of myocarditis are always syphilitic. In going over thirty-five cases of acquired syphilis and staining the tissues that could still be prepared by the Levaditi method, the same form has been found associated with spirochetes. The majority of these were men who had been successfully treated seven to twenty years previously, and not even the attending physician associated the present condition with syphilis. The characteristic is the presence in the muscular fibers of light staining surfaces. There are peculiar fibroblastic cells that follow the course of the smaller vessels. The tissue retains an embryonic type. These characteristics might be interpreted as an edema at first sight. The muscle always shows a peculiar degeneration; and the characteristic appearance is

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that it fades away, without showing a marked contrast, but the paleness runs into the other fibers. In older hearts, fatty degeneration is very common. The tissue is full of spirochetes. The heart muscle is atrophic and the fibers smaller. The epicardium may show a few cells and there is a localization of the spirochetes, the same condition showing in the endocardium. No part of the heart is free from this. In one case, that of a child 2½ months dying suddenly, the heart alone contained these spirochetes. This localization of spirochetes is the important point. It is found many times after a man has no symptoms elsewhere in the body, and associated with weakness of the heart, likewise with sudden death.

DISCUSSION

Dr. John E. Greiwe, Cincinnati: Literature on the subject teaches that syphilis has a very definite area in the heart, i. e., very close to the aortic rings and aortic valves, but the case is now made out beyond the question of a doubt that every process of the myocardium is to be dealt with. These cases which have been looked on as edema of the muscular tissues occurring shortly before death, have been absolutely proved to be of syphilitic origin.

Dr. J. M. Rector, Columbus: Have you used salvarsan in any of these cases and with what result?

Dr. G. F. Zinninger, Canton: Are there any criteria for diagnosing these cases on clinical grounds ante mortem?

Dr. Kennon Dunham, Cincinnati: Has a similar condition been found in the lungs?

Dr. C. E. Norris, Akron: Can any reason be given as to why the spirochete of syphilis localizes in the heart tissues?

Dr. A. S. Warthin, Ann Arbor, Mich.: I have not had any opportunity to make an autopsy on cases in which salvarsan has been used, nor do I know why the heart is a place of selection for the spirochete, but when there are none elsewhere the heart will show great numbers of them. A large number of these cases show the typical syphilitic aortitis. I have not found in these cases either lesions or spriochetes in the lungs. The important thing is that enormous masses of these occur in a certain place and not in others, and why drugs and treatment will not affect them will have to be worked out afterward. I do not believe that a clinical diagnosis can be made. The diagnosticians have not suspected syphilis in a great many cases until the heart was examined. Just now the case is one for pathologists, but one must, in cases of sudden death, think of cardiac syphilis and look to the laboratory demonstration for the cause.

(To be continued)

MEDICAL ASSOCIATION OF GEORGIA

Sixty-Second Annual Session, held at Rome, April 19-21, 1911

The President, Dr. E. C. Davis, Atlanta, in the Chair

The officers elected were named in The Journal, April 29, page 1270.

Addresses of welcome were made by Judge Moses R. Wright of Rome and by Dr. W. W. Mangum on behalf of the local profession. Dr. Dunbar, Atlanta, responded in behalf of the association.

The Association of Uncinariasis in Cataracts

Dr. F. P. Calhoun, Atlanta: Some months after Harris announced the prevalence of hookworm in the South, there was found in an eye clinic in Atlanta a case in which there were mature cataracts. Examination of the feces confirmed the diagnosis of hookworm. This case and others subsequently found were reported by my father, and, with a number that have come under my own observation, lead me to believe that the anemia of hookworm can cause cataract. All these patients state that at one time they had good vision; there was sickness which developed after having the ground-itch (meaning anemia and its results), then occurred the gradual loss of sight and finally partial or total blindness. In all of these patients the age at which the sight commenced to fail is unusual for the development of cataract.

DISCUSSION

Dr. W. E. Taylor, Atlanta: All sorts of general diseases affect the eye and therefore the examination of the eyes should be undertaken only by men who have had experience in this line of work.

Dr. R. P. Cox, Rome: Seven or eight years ago I made an examination of school children and found that 56 per cent. of the pupils had the disease in one way or another.

Dr. A. G. Fort, Lumpkin: In an examination of individuals almost if not completely blind, a large percentage will be found infected with hookworm disease. I do not believe that hookworm itself will produce blindness, but that there is some relationship between the hookworm toxemia and defective vision.

Dr. F. P. Calhoun, Atlanta: I am unable to say how cataracts are produced by hookworm, but it is often found that lens shows beginning cataract and this is excited to growth by the hookworm.

Treatment of Digestive Disturbances by the Surgeon

Dr. R. P. Glenn, Columbus, Ohio: Some of the conditions best treated by surgical measures are: 1. Gastric and duodenal ulcer with its proneness to become malignant will often yield to no measures with such promptness and satisfaction as to an operation. This is to be resorted to only after a reasonable time has been devoted to medical treatment. 2. Patients suffering from chronic cholecystitis or cholelithiasis, if not relieved by hexamethylenamin, olive oil and sodium phosphate are fit subjects for the surgeon. 3. The gall-bladder and appendix are responsible for a large majority of cases of so-called indigestion and when this is the case their drainage or removal is the only way to secure satisfactory results. 4. All physicians are familiar with the nervous and digestive symptoms which accompany gynecologic cases and how quickly they disappear when the cause is removed.

Psychotherapy in Habitual Constipation

Dr. E. T. Gibbs, Gainesville: In reporting this series of 106 cases of habitual constipation cured by psychotherapy, no originality is claimed for the idea, as it was obtained from Dubois of Berne, who has used the method for over thirty years. In the series were a number of cases of dilatation of the colon, with such symptoms as headache, vertigo, nausea, gaseous eructations, slight dyspnea, pains in the back, and, at times, various nervous symptoms. It seems to me that the establishment of regular peristaltic action, a proper diet and a reeducation of the patients' ideas concerning themselves has largely to do with their future well-being. In these cases an effort has been made to use only rational persuasion. Particular pains are taken to make no statement that is not what I believe to be absolutely true. Then it will become possible to persuade the patient of the logic of such a statement step by step. In a general conversation the patient's ideas are studied and we find the obstacles which our conversation is to overcome. The influence of habit is emphasized and a few examples suitable for the individual patient are cited. It will be easy for the patient to recognize that if the regular retiring hour is ten o'clock the eyelids will become heavy at that hour. The patient may not have analyzed these facts and applied the comparisons which we suggest. We can show him that when he is constantly devising means for the operation of his bowels they become accustomed to the aid and wait for it. The functions of digestion are gone over in a simple way and special stress is laid on peristalsis, mastication, deglutition, etc. No directions much out of the ordinary are given. Emphasis is placed in the successive invitations given by getting out of bed, dressing, taking a glass of cold water, then breakfast and then going to the toilet. Coffee, dry toast and crisp bacon may be ordered for breakfast. Directions are given as to the use and abuse of the abdominal muscles and the will power. An enema may be given the third or fourth day, but do not tell the patient this until the time arrives. Much depends on getting the confidence of the patient. A certain amount of enthusiasm, together with sincerity in expectation of outcome, is a valuable, if not a necessary, adjunct to the physician giving the direction. Both highly intelligent and ignorant persons have alike responded to the treatment. The time of recovery in all cases was within six days. A liberal diet, especially of vegetables and fruits, free drinking of water and regularity of the chosen hour are all important.

Penetrating Wounds of the Abdomen

DR. J. R. B. BRANCH, Macon: I have collected fifty cases from the Macon Hospital records, showing a mortality of 52 per cent. These patients were operated on by six different surgeons and we have reached the following conclusions: 1. In all penetrating wounds of the abdomen seen within twelve hours from the time of the injury, operation should be done as promptly as is consistent with good technic and skilful work. 2. The incision should be made large enough to insure a good survey of the abdominal viscera without unduly exposing them. 3. Extensive evisceration is unnecessary and unjustifiable, greatly increasing the mortality. 4. Unless the peritoneum is extensively soiled, intestinal content should be wiped away with salt gauze sponges; irrigation does more harm than good. 5. If the closure of the perforation, or destruction of the blood-supply threaten seriously the usefulness of a portion of the bowel, resection should be done. 6. If the peritoneal cavity is soiled extensively drainage is safer; otherwise the incision may be closed. 7. Post-operative treatment is very important. Fowler's position should be maintained.

DISCUSSION

DR. W. P. HARBIN, Rome: The great fault lies in waiting for symptoms which indicate perforation of the intestines. To follow such a policy is fatal in many instances. In any case of doubt regarding the perforation of the intestines it is better to open the abdomen at once. In many instances it is a long and tedious process to find a small perforation. I have a case in which failure to find an abrasion of the intestine led to the development of a fecal fistula three weeks after the operation.

Fifty-Seven Consecutive Operations for Fibroid Tumors of the Uterus

DR. EDWARD G. JONES, Atlanta: The operations analyzed represent my own individual work. They are consecutive and comprise fifty-one abdominal hysterectomies, two abdominal myomectomies, three vaginal myomectomies and one celiotomy without removal of the tumor. The youngest patient was 21 years of age and the oldest 54. In regard to prior symptoms, forty complained of pelvic pain, six did not so complain, four had pain irregularly, and in seven cases no record was made. In regard to hemorrhage, no record was made in eight cases; in nineteen, hemorrhage was irregular and profuse; in fifteen neither irregular nor profuse; irregular in seven, and profuse in eight. Leukorrhea was profuse in thirty-three, slight in four, absent in twelve, and there was no record in eight cases. There was troublesome vesical irritation in thirty-three cases, no irritability in sixteen and no record in eight. Data in regard to childbearing in thirty-nine of these women showed that thirty-six had borne a total of sixty children. Of the thirty-six, thirteen had never been pregnant. There was a total of fifty abortions or miscarriages. As to postoperative history, forty-nine have reported the general health satisfactorily improved since the operation. No hernia has developed in any instance, and all have reported but seven. Of forty-four patients on whom hysteromyomectomy was done, a bloody discharge simulating menstruation is reported as occurring a few times in nine patients; in thirty-five there was none. In some of the cases the leukorrhea continued about as before the operation and in some it was less troublesome. Nine patients complain of slight bladder irritation since operation, but none of severe irritation. Such information as I have been able to secure indicates that when the menopause is brought on artificially by removing both ovaries, the symptoms experienced are less severe than with the natural menopause. No patient has developed serious mental disturbance. A few patients complain of the persistence of vague pain, but a number in whom such pain was to be expected because of extensive adhesions seemed to be surprisingly clear of it. Experience has taught me to be more and more careful to suspend the cervical stamp, if left, by the round ligament or by the gathered peritoneum of the broad ligament. In none of these cases have gall-stones been discovered, though they were always sought by palpation. There were four deaths in this series of cases, but only one in the last thirty-seven.

DISCUSSION

DR. S. T. BARNETT, Atlanta: In making the amputation was the cervix included? I had the misfortune to lose two patients, owing, I believe, to the fact that the blood was impoverished; the hemoglobin percentage was so low that the women had no chance to survive the operation. They should have been given the opportunity to have the hemoglobin percentage brought up.

DR. J. L. CAMPBELL, Atlanta: I consider the care of the ureters as very important in these operations. I have found that giving methylene-blue twenty-four hours prior to the operation will stain the ureters a deep blue; since using this method I have never cut or tied the ureters. This method is valuable in operating on intraligamentous tumors where the tumor is between the broad ligament and the ureter. The patients on whom I have operated have experienced considerable trouble after their periods. I believe in leaving all the ovarian substance possible.

DR. FLOYD W. MCRAE, Atlanta: There is no danger to the ureters if one keeps close to the tumor he is removing. A careful surgeon never cuts or ties a ureter. I am interested in the way Dr. Jones has followed up the histories of his cases. We do not want to know merely whether the patient survived the operation, but we do want to know what the condition is three, four or five years afterward. I, too, wish to emphasize that we should leave as much of the ovarian tissue as possible.

DR. E. G. JONES, Atlanta: Supravaginal amputation has been the operation of choice; I do not think that the mere fact that a woman has a cervix calls for its removal in these cases. In dealing with the ovaries as much of them should be left as possible; but, as a matter of fact, if one or both ovaries suffer from a surgical lesion and are left it shows bad surgery on the part of the operator.

Nausea and Vomiting; Their Clinical Significance

DR. W. W. JARRELL, Thomasville: Nausea is an initial symptom of a condition of which vomiting is a later manifestation. This proposition, however, must be modified somewhat for we may find nausea without vomiting and vomiting without nausea. Nausea is classed with pain, hunger and thirst, all sensations which cannot be referred to any nerve center. Nausea may result from the stimulation of any of the senses, and it may attend certain intellectual processes; it is also a symptom of organic disease and the presence of toxins in the system. The non-toxic group comprehends such causes as repulsive sights, nauseous odors, suffocating heat, disgusting tastes and profound nervous shocks, either through the channels of sensation or through the intellectual faculties. The toxic group should be divided into organic and non-organic causes. The organic causes include diseased or changed conditions of the various viscera whereby their normal relations are disturbed or their normal functions become morbid. The non-organic class embraces those substances which through their chemical or physical characteristics, by their local or general action produce this sensation. In this group naturally fall foreign substances, be they indigestible foodstuffs or chemical poisons. These non-organic causes, even though they may occasion sudden death, are not, generally speaking, so insidious or dangerous as the organic type, and they are far more amenable to treatment. Nausea of the organic type is often very obscure in origin and its true significance may not be recognized till the condition is irremediable. Every viscus of the body may evince nausea as a symptom of derangement. The causes of vomiting, like those of nausea, may be classified as non-organic and organic, the terms having the same significance as in the classification of nausea. It is the organic type of vomiting with its complexity of causation that requires the exercise of one's keenest faculties to save him from false conclusions and serious mistakes. Nausea and vomiting are common to a multitude of conditions, varying from simple mechanical distention of the stomach to intestinal obstruction, from functional derangements to malignant diseases, from hysteria to morbid changes in the brain and cord. They are symptoms which should not be overlooked.

The Treatment of Fractures

Dr. T. J. Charlton, Savannah: One of the surprises that the Roentgen-ray has revealed is that the much-dwelt-on perfect apposition of the fragments is practically never obtained, and this regardless of the method of treatment. Return to function is the chief factor in the treatment of fractures, though to obtain this we have to accept a certain amount of deformity. There are three methods of treatment that have attracted much attention and are destined to influence all future treatment. First is the open treatment, of which Lane is the chief exponent. The second method is that of Bardenheuer of Cologne and consists of a more or less complicated system of extension and counter extension. The third method was introduced by Lucas-Championnière of Paris and consists of massage and movements, both active and passive, applied from the beginning of treatment and continued until the parts are restored to function. To secure the best results we must keep in mind that by the end of the second week the set of the fracture is fixed and that the early work determines the result. One must keep in mind the causes acting to displace the fragments, retraction of the muscles, hemorrhage into the tissues, and inflammatory edema. In all recent fractures plaster of Paris should be used with the utmost caution. It is always best to put up a fracture as soon after injury as you can and to use the simplest splint that will retain it in place; it takes only a little mechanical skill and special splints are not required. I consider the daily adjustment of splints for the first two weeks of the utmost importance. Only in this way can one be certain to balance the disturbing elements of muscle retraction, hemorrhage and inflammatory edema. Massage and movement is a great aid; it adds to the comfort of the patient and hastens recovery. This is combined with passive movements of the nearby joints and it is not necessary to put the joint through its full limit of motion. Slight movement of the fragments during massage is unimportant and will not delay union, but rather quicken it. The physician should always perform this massage himself. When the union becomes fixed, the patient may move the joint himself, thus supplementing the passive movements, but always with the same care and gentleness, supporting the fracture with the hand as a splint. In the fractures of children, massage and movement are not so important.

Surgical Deliberation

Dr. Floyd W. McRae, Atlanta: As I grow older in surgery I am more impressed with the importance of surgical deliberation. I have seen many incomplete or misdirected operations followed by unsatisfactory results which were later cured by complete, properly directed, well-executed operations. I have known many cases of overlooked conditions, as a pus tube or ovarian cyst left and the appendix removed; pelvic surgery done completely and well, but a gall-bladder full of death-dealing stones; or a gastric or duodenal ulcer overlooked; the appendix removed to be followed by identical postoperative attacks of mucous colitis. The colitis could have been diagnosed by careful observation. On the other hand, many cases of gall-stones, cholecystitis, gastric ulcer, duodenal ulcer and chronic fibroid appendicitis are being mistreated and misnamed indigestion, hypo-acidity or hyperacidity, etc. Surgery and surgeons are thus brought into disrepute. How often has careful investigation with laboratory aids stayed the too ready surgical hand? We need specialists but not the "made in six weeks type" who assume the whole human organism to be a thing revolving around their little specialty. We need men fair enough to realize the worth of their fellow workers and to give those who appeal to them for aid a square deal. I find myself every year more and more indebted to the laboratory, but we must not allow ourselves to become too dependent on this help. Every surgeon should so perfect himself in diagnosis that he will have fewer and fewer occasions to correct himself on the operating table. There should be more cooperation between specialists and general practitioners, and the surgeon should recognize that after operation the patient has need of the care of his family physician.

DISCUSSION

Dr. E. G. Jones, Atlanta: It is wonderful how much important information can be elicited in taking a careful history, but much patience is required on the part of the examiner. Two or three days' observation is too short a time in these cases and is only called for in emergencies. These patients should be brought back to the physician again and again if he is to make an accurate diagnosis.

Dr. Fenton B. Turck, Chicago: Dr. McRae's paper calls for the better education of medical men throughout the country, and presents the importance of more study, especially as it refers to the laboratories. To establish laboratories in smaller towns would not cost a great deal. The close contact among men in these laboratories would be of value.

(To be continued)

ASSOCIATION OF AMERICAN PHYSICIANS

Twenty-Sixth Annual Meeting, held at Atlantic City, N. J., May 9-10, 1911

The President, Dr. F. Forchheimer, Cincinnati, in the Chair

A list of officers elected was published in The Journal, May 20, p. 1490.

The General Practitioner

Dr. F. Forchheimer, Cincinnati: The general practitioner is still the backbone of the medical profession. His development implies so much attrition, so much knowledge, so much resourcefulness, so much character and so much humanity that when the general practitioner has attained his full growth he is easily among the first citizens of his community. Nowhere does weeding out go on more rapidly than in the medical profession. Those who are eliminated first are the ones who have failed on account of adverse external conditions such as poverty and professional competition. Hartman accepts three kinds of nobility, namely, of birth, of mind and of finance, and places physicians in the second class. Premedical education is in a chaotic condition. According to the higher demands of certain states and certain schools so much time is required for premedical education that the student gets through his medical course at too advanced an age. The remedy for this lies in making a change in the curriculum of the primary and the secondary school.

A Clinical Study of Ascites

Dr. R. C. Cabot, Boston: I have tabulated the autopsy and operation records of the Massachusetts General Hospital for the past forty years to show the relation these figures bear to the clinical diagnosis of ascites. The bulk of the cases were found to be due to one of five causes: cardiac weakness, nephritis, abdominal neoplasms, cirrhotic liver or tuberculous peritonitis. Among the possible causes of extensive ascites we must not lose sight of the small solid tumors of the ovary. Pleural effusion may be produced by an extensive ascitic accumulation. This association may lead to a false diagnosis of pleural and peritoneal tuberculosis. The cure of both pleural and peritoneal effusions may result from excising a benign ovarian tumor. Among all causes of ascites, tuberculous peritonitis may sometimes be recognized by the greater slowness of its accumulation of fluid.

DISCUSSION

Dr. Lewis A. Conner, New York: Did Dr. Cabot make a study of the fluid itself to aid him in his diagnosis in ascites? It seems to me sometimes that is of considerable value, just as it is in pleural fluid.

Dr. R. C. Cabot, Boston: We worked with the fluids in every case, and I was impressed with the fallibility of this test when one came to really doubtful cases. Of course, in cardiac or renal cases one got low gravity fluids, but when one came to tuberculous peritonitis, cirrhosis of the liver and ovarian ascites, the three in which there is real difficulty in diagnosing, at times the characteristic fluid was present, but as a rule, nothing of importance; the albumin and specificity were no guide in these cases.

The Present Status of the Tuberculin Test

Dr. Lawrason Brown, Saranac, N. Y.: Among laboratory animals only those which are tuberculous react to tuberculin. Normal animals have tuberculin tolerance but no tuberculin anaphylaxis. Many autopsy reports throw grave doubts on and, I believe, disprove all published statistics which show that other diseases react specifically to tuberculin. Such cases are in reality double infections. A slight tuberculous infection may be sufficient to cause a reaction for a time and yet leave no permanent pathologic change visible to the naked eye. The conjunctival test has produced a number of unfortunate accidents, but by excluding all patients who have ever had trouble with their eyes, and using only 1 to 5 per cent. solutions of the old tuberculin, the test seems comparatively safe. There is some danger in the cutaneous test, but it is so slight that it may be disregarded, except in scrofulous children. The tuberculin test sometimes results positively in healthy men; a circumstance which warns us not to depend too much on it. Also failure to react to 10 mg. of old tuberculin, given subcutaneously, does not exclude clinical tuberculosis. However, in the presence of indefinite symptoms such patients do not require treatment. A negative subcutaneous test in a tuberculous person may indicate either the absence of receptors at the site of the lesion or the presence of free antibodies in the blood. If we except, for the time being, leprosy, tuberculin is a specific test for the detection of tuberculous infection. In practice, exposure to infection, characteristic symptoms, such as hemoptysis, pleurisy with effusion or dry pleurisy on both sides, and localized persistent physical signs at one apex are diagnostic data of far more importance in clinical tuberculosis than that derived from the tuberculin tests. The subcutaneous test is still the most reliable of the tuberculin tests.

DISCUSSION

Dr. Frederick C. Shattuck, Boston: I wish to corroborate Dr. Brown's statement that the subcutaneous test is the most reliable. I have used it for many years with the utmost freedom. I have never seen any untoward result beyond a disturbance of two or three days, except in one case of Addison's disease. Two days after the injection the patient was dead.

Dr. Theodore C. Janeway, New York: I want to corroborate Dr. Shattuck's experience of rapid fatal issue in Addison's disease following injection of tuberculin for diagnostic purpose.

Dr. Henry Koplik, New York: I make use of the von Pirquet test in children almost as a routine. In some cases in older children, wishing to confirm the diagnosis of tuberculosis, where there were other conditions present, such as pleurisy with effusion, after the patient has improved and the temperature dropped and the patient has been well for a little while, I have had some very unpleasant experience in trying to confirm the test of von Pirquet in making injections of old tuberculin. The temperature rose, the effusion increased and the little patients were quite ill. This is a very unpleasant thing to happen to a clinician after his patient has been apparently on the road to recovery.

Dr. I. Adler, New York: I have had under observation now for two years a mild case of undoubted Addison's disease; the patient has been exclusively and continuously treated with tuberculin injections, beginning with very small doses, and now she is taking very large doses and has been perfectly well and has been bettered by it.

Dr. Joseph L. Miller, Chicago: I believe the very conservative stand by Brown is to be very highly commended. Since the introduction of the simpler tuberculin tests, like the von Pirquet, I believe there has been a great deal of harm and injustice done the patients by assuming that inasmuch as they gave a positive von Pirquet, it was necessary that they be sent away from home and be treated as patients suffering with the severe form of tuberculosis, whereas, as a matter of fact, there was no clinical evidence that these cases were tuberculous.

Quinin and Urea Hydrochlorid Hypodermically in Acute Pneumonia

Dr. S. Solis-Cohen, Philadelphia: There is a tradition that quinin given early will abort an attack of lobar pneumonia. In an early experience of mine, 60 grains of quinin sulphate, given in error in a period of six hours, beginning two hours after the initial chill, apparently acted in this manner. The revival of the quinin treatment of pneumonia by Galbraith in 1904 led me to employ the double hydrochlorid of quinin and urea. From 6 to 10 grams, according to effect, are given in from 48 to 72 hours. Cinchonism does not develop. Temperature and pulse fall gradually and proportionately; and respiration more rapidly—with a tendency to restoration of the normal pulse-respiration ratio. Blood-pressure remains stationary or increases; cough diminishes; breathing becomes relatively easy; delirium abates or disappears. Crisis does not occur. Termination is by lysis at about the ordinary time, five to eleven days. Percussion and auscultation signs are uninfluenced. Involvement of new areas may take place during treatment, with return of symptoms, necessitating new injections. Pneumococcic empyema has occurred. The pathologic processes in the lung would thus appear to evolve in the customary manner, unmodified by the treatment, which is apparently not germicidal and is without effect on tissue changes, but is chemical and antitoxic. Fresh air, water, saline infusions, and symptomatic medication when needed, were associated with the quinin treatment.

DISCUSSION

Dr. F. P. Henry, Philadelphia: Two years prior to the time at which Dr. Cohen claims to have instituted the use of quinin in the treatment of pneumonia I was led to its use through an article by Petzold. I used the hydro-chloro-sulphate of quinin. I can corroborate all that Dr. Cohen says in favor of the method.

Dr. A. Jacobi, New York: I have used the double hydrochlorid of quinin and urea a great deal, but have found that it frequently produced gangrene of the skin.

A Pneumatographic Study of the Respiratory Irregularities in Meningitis

Dr. Lewis A. Conner and Dr. Ralph G. Stillman, New York City: Forty-one cases of meningitis were studied graphically by means of the Marey spinal spring type of pneumatograph; one tube being placed about the upper part of the chest to record the thoracic movements, and a second about the abdomen at a point midway between the ensiform cartilage and the umbilicus to register the movements of the diaphragm. In thirty cases of tuberculous meningitis respiratory disturbances occurred during some part of the illness and usually throughout the greater part of it. Among eleven nontuberculous cases alterations in the respiratory rhythm were observed in all but two cases. The disturbances of respiratory rhythm in meningitis can be divided into three fairly distinct groups: 1. Type of Cheyne-Stokes. 2. Biot's "meningitis rhythm." 3. An undulatory type. The Cheyne-Stokes type seen in infants and children with meningitis shows certain differences from that ordinarily seen in adults. Biot's type of breathing is characterized by constant irregularities in rate and force, by frequent occurrence of deep sighs and by apneic pauses varying in length and occurring at irregular intervals. In the undulatory type there is a rhythmical variation in the force of the respirations, or in the tone of the respiratory muscles or in both of these together without any periods of apnea. This undulatory type was observed at some time in almost every case. In twelve out of forty-one cases it was the only type of disturbance noticed. In twenty-three cases (56 per cent.) Cheyne-Stokes breathing was observed. In ten cases (25 per cent.) Biot's type was noticed at some time. In six cases both the Cheyne-Stokes and the Biot types were seen at different times. Because of its occurrence in almost every case of meningitis and because it is often observed early in the disease, this symptom of disturbed respiratory rhythm is of very considerable diagnostic importance, especially in meningitis of the tuberculous type in which the onset is often slow and insidious.

DISCUSSION

DR. HENRY SEWALL, Denver, Colo.: Are you sure enough of your apparatus to make it quantitatively reliable?

DR. S. J. MELTZER, New York: Was there any difference between the diaphragmatic and abdominal breathing?

DR. J. H. MUSSER, Philadelphia: Were there any controls in the experiments of breathing children? We all know the remarkable tricks they play with their breathing apparatus when asleep and when awake.

DR. L. A. CONNER, New York City: While all these instruments are not mathematically accurate, they are very accurate in a general way. They show the same thing in case after case. By heightening or loosening the tension of the pneumatograph we can make some difference. By relaxing sufficiently one can understand that we could get no abdominal tracing at all, but when one gets familiar with the tension to be used, one can get in the same case at different times and under different conditions usually just about the same size tracing. We used a great many controls in our work with children.

Abdominal Tenderness with Pain Due to Thoracic Lesions

DR. ARTHUR R. EDWARDS, Chicago: I had two cases of severe, diffuse abdominal symptoms in pneumonia and in pericarditis, which completely simulated abdominal perforation or peritonitis, and in which operation disclosed no peritoneal lesion. In neither case was there the slightest symptom or sign of thoracic disease at the time of invasion. The pain was severe, early and diffuse; the tenderness was as marked on deep as on superficial palpation; and the abdominal rigidity was extreme. The usually available differential points were not helpful; the general symptoms, which generally indicate a systemic infection rather than a local condition, were absent. In this thoracic pseudo-peritonitic or pseudo-perforative symptom-complex, the abdominal muscles may be spastic, the legs drawn up, the body rigid, and collapse may intervene. The invasion symptoms indicate operation and no certain criterion exists at the onset. The majority of patients operated on recover. [This paper will appear in THE JOURNAL.]

DISCUSSION

DR. J. P. C. GRIFFITH, Philadelphia: It has been my fortune to see a good many of these cases. I have reported five cases and have one unreported case. I agree with Dr. Edwards that the diagnostic signs are not to be depended on. I have seen cases which I had no doubt were pelvic, but they turned out to be thoracic. The only thing to do is to make pretty sure before doing operation.

DR. F. P. KINNICUTT, New York: Dr. Edwards has drawn attention to an important fact that we should all consider. We are familiar with the mistakes of our surgical colleagues in cases of this kind. If we can wait, if the surgeon is not too insistent for immediate operation, we may obtain some information from examination of the blood. But often the symptoms are so impressive that the surgeon says we must operate at once.

DR. H. U. WILLIAMS, Buffalo, N. Y.: I would like to suggest the importance of fluoroscopic examination of the chest, because you get signs of pneumonia which are perfectly evident with the fluoroscope before you get any physical signs.

DR. M. H. FUSSELL, Philadelphia: No one believes more thoroughly than I in the grave importance, the absolute necessity of an early operation in abdominal cases of the character simulated by all these cases of Dr. Edwards, and yet I never approach a case which appears to be abdominal without the greatest trepidation because of the mistakes I have made myself and because of the mistakes I know others have made. There is no one symptom or set of symptoms which will enable us to make a diagnosis; it is the ensemble by which we come to our conclusion.

DR. JAMES TYSON, Philadelphia: I wish to come to the defense of the surgeon under the circumstances. In my early experiences it was the surgeon who suggested delay, and because of the well-known occurrence of such symptoms when there was no necessity for operation. Most of these cases occur in children. Operation was deferred and the child apparently recovered, but some months later the child was operated on for appendicitis and appendicitis was found, so that you can have the rule working both ways.

DR. A. JACOBI, New York: The surface abdominal pain is easily explained in such cases by the extensive connection of the pneumogastric nerve. Is there an anatomic connection which explains the intense visceral pain dependent on thoracic diseases?

DR. J. A. CAPPS, Chicago: I would like to ask Dr. Edwards whether he found any sign of involvement of the diaphragm. I think there is evidence that the diaphragmatic pleura in these cases is involved.

DR. S. J. MELTZER, New York: I have seen a man dying of angina pectoris who had been treated by one of the best men in New York for gastric catarrh and gall-stones. I have seen one patient who had been operated on and who had had pneumonia which it did not take a very careful examination to discover and he was in the hands of an excellent surgeon.

DR. HENRY SEWALL, Denver: Is abdominal pain ever noticed when the lesion is in the left lung?

DR. S. SOLIS-COHEN, Philadelphia: I wish to call attention to a case of pneumonia of the left lower lobe which had been mistaken for gastric ulcer because of vomiting of blood-streaked mucus, together with epigastric pain and tenderness. I first saw the patient after three days illness, and at this time there was no doubt of the diagnosis of pneumonia. Recently I have had three cases of pneumonia referred from the surgical to the medical ward, the patients having been sent to the surgical ward with the diagnosis of abdominal disease. The correct diagnosis of pneumonia was made by the surgeons and the patients transferred.

DR. E. LIBMAN, New York: I would be in favor of having a fluoroscopic examination made before proceeding to operation in these doubtful cases.

DR. J. C. WILSON, Philadelphia: It must be borne in mind that the early signs of croupous pneumonia consist in impaired vesicular murmur and slightly tympanitic percussion resonance.

DR. A. R. EDWARDS, Chicago There was no diaphragmatic sign. Abdominal pain may be caused by lower lobe pneumonia on either side.

(To be continued)

AMERICAN GASTRO-ENTEROLOGICAL ASSOCIATION

Fourteenth Annual Meeting, held at Philadelphia, April 19-20, 1911

The President, DR. W. B. CANNON, in the Chair

Officers Elected

DR. WALTER B. CANNON, Boston, was reelected president, and DR. F. W. WHITE, Boston, was elected secretary-treasurer.

The Importance of Tonus in the Mechanical Activities of the Alimentary Canal

DR. WALTER B. CANNON, Boston: The view that tonicity of the neuromusculature of the alimentary canal is a fundamental necessity in the appearance of rhythmic movements gives an explanation of many features regarding digestion and harmonizes many diverse observations. It gives a reasonable explanation of the existence and importance of extrinsic motor nerves; it indicates the function of inhibitory nerves in the reduction or abolition of the tone; it accounts for the failure of efficient motility in atonic states of the stomach and intestines; it is in agreement with the observation that tonic contraction and rhythmic peristalsis reappear later in cases of general body-weakness; it fits admirably with the fact that the stomach of hungry animals is strongly contracted, for then the tonic state makes the organ ready for instant action on swallowing food. Indeed, I believe that the sensation of hunger results from tonic contraction of the empty stomach.

Stretching of the Pylorus in Benign Stenosis

Dr. Max Einhorn, New York City: I should like to speak of stretching of the pylorus in children by means of an instrument called the infantile pyloric dilating catheter. This is a flexible tube with an inflatable rubber balloon at its end. In order to introduce it beyond the pylorus, the infant must first swallow either a small duodenal bucket or a metal olive attached to a silk string. After having ascertained that this has wandered beyond the pylorus, the dilating catheter is pushed along the silk thread into the duodenum, the balloon inflated and the instrument withdrawn. I have used this method in two cases. One infant got entirely well and remained so. The other was not benefited.

For stretching the pylorus in adults, I use a new instrument called the pyloric dilator and diaphane, which consists of a pyloric dilator with a tantalum (cold) lamp at its end. The advantage of this instrument consists in the fact that it is possible by means of internal illumination to ascertain whether the end is in the stomach or in the duodenum. I have treated in this way three cases of real benign stenosis of the pylorus, with very beneficial results. In order to insure success, there must be no active ulceration in or near the pylorus, nor must the stricture be too far advanced.

DISCUSSION

Dr. Morris Gross, New York City: I do not think it possible to pass a tube like this through a stenotic pylorus. If Dr. Einhorn does succeed in doing so, we must infer that stenosis did not exist at the pylorus at all, or only to such an extent that stretching was not called for.

Dr. A. L. Benedict, Buffalo, N. Y.: I cannot, as a rule, get a tube down through the pylorus. Bile on the end of a thread does not necessarily mean that the tube has entered the duodenum. A little medication will usually overcome the condition in a case of spasm.

Dr. S. J. Meltzer, New York City: It does not sound very plausible that a single passage of the instrument could have been sufficient to reestablish function. In cardiospasm nobody has succeeded in stretching the cardia in so short a time, and pylorospasm is much harder to reach.

Dr. C. D. Aaron, Detroit, Mich.: I have dilated the pylorus in a patient sent to me by Dr. Einhorn. She has gained 8 pounds, and is increasing in weight.

Dr. Jesse S. Myer, St. Louis, Mo.: Dr. Einhorn's experience proves that pylorospasm does exist. Cardiospasm can be cured by stretching. It is evident that it will stand as a curative measure in a certain number of cases.

Dr. W. G. Morgan, Washington, D. C.: In a case with symptoms of pylorospasm I passed the dilator, and the next morning was able to withdraw it at 40. That night the patient had no symptoms, but the next night they recurred. The surgeon said that on account of the nature of the scar he found, no stretching would probably have been effective. The reason the patient had no symptoms the first night after the passing of the dilator was probably the psychic effect produced on her mind by that procedure.

Dr. Max Einhorn, New York City: It is only beginning strictures that can be benefited by this method. The pylorus can close on account of the presence of a foreign body near it in the duodenum; but if, at first, there is resistance on attempting to withdraw the bulb, and later there is none, unless the diameter is greatly increased, we may conclude that there has been a real stricture.

Operative Treatment of Impermeable Cardiospasm

Dr. Willy Meyer, New York City: The cure of impermeable cardiospasm by means of dilatation is difficult or impossible. Therefore, operative measures will often be required. Von Mikulicz and Wendel attacked the cardia from the abdomen. It is said that the trouble can also be cured successfully and permanently by way of the thorax. In support of this view, I will mention a case in which a cure was obtained by means of thoracotomy, tearing the nerve filaments that enter the esophagus on each side from the pneumogastrics, and reducing the large esophageal pouch above the diaphragm with the help of a double plication.

Cardiospasm in Infants

Dr. W. G. Morgan, Washington, D. C.: I had a case of cardiospasm with dilatation of the esophagus occurring in an infant under one year of age, which was treated by Dr. Einhorn's method; and I have also had a case of cardiospasm in an adult, which had been treated by gradual dilatation with bougies, the patient failing all the time. I stretched the cardia with Einhorn's forcible cardia dilator. This patient is now eating everything, and has gained 19 pounds in weight.

Cardiospasm

Dr. S. J. Meltzer, New York City: The evidence of gain in weight in the patient does not prove the correctness of the diagnosis. Twenty years ago, I described a case of cardiospasm under the term "dysphagia," giving the entire clinical course, and predicting what would be found after death. The patient died, five years later, and a partial autopsy was made, confirming my diagnosis. If you hear the esophageal sound down to the tenth or eleventh vertebra, yet find the deglutition sound in the stomach always absent, you can be sure that there is an elastic stenosis. Every time an eructation takes place, you can also hear a definite sound in the region of the cardia. In patients with cardiospasm, you do not hear this sound.

DISCUSSION

Dr. J. C. Hemmeter, Baltimore, Md.: I have had very severe cases of cardiospasm in which the esophagoscope went in; but when the patient swallowed, there came a spasm, and nothing would go through. I have had only very temporary success in dilating the cardia with mechanical methods.

Dr. J. Kaufmann, New York City: Among my patients there were a surprisingly large number that dated their first attack of cardiospasm to a hot day when they had taken ice-cold soda water. Probably the first spastic contractions led to the development of erosions, which afterward kept up the irritation. Another cause for the development of erosions is hyperacidity. One should be careful not to be too ready to attribute it to a psychic basis.

Dr. L. Kast, New York City: Cardiospasm is not a correct term, and should be dropped in favor of one that would indicate the function of the cardia with relation to the parts above and below. In examining a patient suffering with regurgitation of food by the fluoroscopic method, it was found that it was the contraction of the stomach that pushed the food through the whole esophagus and into the mouth.

Dr. Jesse S. Myer, St. Louis: I do not quite see why, in the case mentioned by Dr. Willy Meyer, gastrostomy with forcible stretching of the cardiospasm was not tried. I do not think that the size of the pouch would constitute any contraindication to this.

Dr. J. C. Johnson, Atlanta, Ga.: There come times, in cases of esophageal obstruction from any cause, when even an operation cannot be considered. I had such a case. Not even the smallest bougie would pass. We finally succeeded in getting a very small wire probe into the stomach. We then used an instrument to the end of which an electrode could be connected, and placed the other electrode at the back of the man's neck, turning on the galvanic current. We had an olive on the wire, and insulated to that point. In a quarter of a minute, the olive, following the probe, began to descend.

It descended a short distance at each treatment. We continued these treatments every day for two or three weeks. We had to turn on the current when we wished to draw the olive back again. The man has gained 20 pounds, and is attending to his business and there is hope of his becoming practically well.

Dr. Robert T. Morris, New York City: In a case of cardiospasm, we should have a report showing that a competent ophthalmologist has eliminated the question of irritation of the vagus at the base of the brain from eye-strain; also reports that he has no loose kidney or adhesions in the bile-tract region, that he has no evidence of a neurotic temperament, and that there are no stigmata of decadence.

Dr. Max Einhorn, New York City: In order to make a diagnosis in cases of partial cardiospasm with dilatation of the esophagus, it is important to ascertain that there is absence of the swallowing sound, that no fluid enters the stomach, and that we cannot pass a probe into that organ. Patients treated by stretching the cardia eat well, do not vomit, and increase in weight; and the swallowing sound is present. Anybody who has seen a case of cardiospasm will have no difficulty in making the differential diagnosis from cancer.

Dr. Willy Meyer, New York City: My patient was too weak for an abdominal operation. It would be better for her to make sure that there was no malignant tumor at the cardia than to separate the nerves and make the double plication. I am not sure, however, whether this double plication was a necessary addition to the technic or not.

(To be continued)

MEDICAL AND CHIRURGICAL FACULTY OF MARYLAND

One Hundred and Thirteenth Annual Meeting, held at Baltimore, April 25-27, 1911

(Concluded from page 1502)

Salvarsan in Relation to Diseases of the Eye

Dr. Harry Friedenwald, Baltimore: The results of the salvarsan treatment are distinctly less favorable in ocular diseases than in general. Plaut's general statistics show failure in only 23 per cent. of cases. In interstitial keratitis failure occurs in 70 per cent., in neuritis 30 per cent., in optic neuritis 20 per cent., in paralysis of the ocular muscles 66 per cent. There is only a doubtful effect, if any, in atrophy of the optic nerves. On the other hand, the improvement when the remedy is effective is usually much more rapid than in general conditions, and the treatment is of shorter duration.

DISCUSSION

Dr. A. G. Rytina, Baltimore: We have treated over 100 patients with salvarsan at the Mercy Hospital, and as yet have had no deaths nor eye and ear complications. I believe that this is because we employ the intravenous method of administration.

Dr. W. T. Watson, Baltimore: Salvarsan has been effective in all the cases which I have observed, with one exception, that of a child with interstitial keratitis. The salvarsan was given in this case by the intramuscular method, on account of the patient's age. The child's condition became much worse. Later treatment by mercury and iodid brought about considerable improvement.

Certain Gynecologic Aspects of Neurasthenia and Hysteria

Dr. Emil Novak, Baltimore: The ordinary gynecologic patient is more urgently in need of a broad-minded specialism than almost any other type of patient. Physiologically and symptomatically, the reproductive organs are in the most intimate relationship with other parts of the body, partly through the agency of the various internal secretions and partly through the medium of the nervous system. Of the two conditions, neurasthenia and hysteria, it is probable that the latter is the less important from a gynecologic standpoint. Any unnecessary surgical interference in the ordinary case of hysteria—and such interference is usually unnecessary—is little short of criminal. Surgical treatment is called for only in the presence of well-defined and unmistakable pelvic disease, and even then in the majority of cases only when associated with distinctly localizing symptoms. Both primary and secondary neurasthenia are of interest to the gynecologist. How is one to tell, if both neurasthenia and pelvic disease coexist, in which cases the neurasthenia is primary and in which it is secondary to the pelvic condition? Principally by a conscientious study of the patient's history. The form of pelvic disease most apt to be complicated with neurasthenia is that which is associated with persistent attacks of pain. If operation be resorted to before very marked deterioration of the nervous system has occurred, the removal of the cause will usually be followed by a much more rapid and striking recovery, with a correspondingly rapid restoration of the nervous equilibrium. If the pelvic organs of the neurasthenic woman are found to be normal, even in the presence of pelvic symptoms, the treatment is not gynecologic, but is that of the underlying neurasthenia.

Dr. W. T. Watson, Baltimore: It is encouraging to see that gynecologists are now taking a broad-minded view of these matters, for this was not always so. Even now conditions are not ideal, for I have seen a good many cases in which women have been made nervous wrecks by ill-advised operations.

Dr. E. B. Claybrook, Cumberland: The recent advances in surgery have more or less spoiled the public, for people have come to look on operation as a cure-all. They do not realize that it must be combined with proper and often intelligent after-treatment.

The Typhoid Situation in Baltimore

Dr. W. W. Ford, Baltimore: One of the most serious problems in public health in the city of Baltimore is typhoid. From Jan. 1, 1910, to Jan. 1, 1911, 235 deaths from this disease were reported to the Board of Health, while for the same time the total number of cases was 1,890. The majority of cases developed during the summer and autumn months. Typhoid has always existed in the city of Baltimore. The records indicate that there has been a gradual diminution of this disease in the city, as compared with the increasing population. In 1890 there were 247 deaths in an estimated population of 413,000, in 1909 only 136 in an estimated population of 580,000. The ten possible sources of the disease, as compiled by Assistant Health Commissioner Jones, are bathing in polluted water, raw foods, privy wells, flies, importation, contact, hydrants in yards, water wells, milk and drinking-water. Five of these have been eliminated, viz., bathing in polluted waters, water wells, hydrants in yards, importation and privy vaults. Raw foods and contact also are probably not important. A great deal of knowledge concerning the life history of flies is necessary before we can incriminate these pests. Two other sources remain to be considered—milk and water. From the uniformity of the distribution of the disease and other considerations, we do not believe that the milk-supply is at present its sole source, or even so important an element as the water-supply. As regards the possibility of a polluted water-supply being responsible for our typhoid, one fact which our investigations have brought out with great clearness is that the pollution or the concentration of the sewage takes place at the same time (it certainly did this year) that we have the largest number of cases of typhoid. Unless we adopt various preventive measures which have proved successful in other cities, we may confidently look forward to a repetition of the conditions which made the summer of 1910 a dreadful typhoid season.

The Whitehead Operation for Hemorrhoids

Dr. Alexius McGlannan, Baltimore: The Whitehead method of excision for hemorrhoids seems to meet all the requirements better than any other method. Our results are based on an analysis of twenty-five cases operated on in the past four and one-half years by Dr. Bloodgood, myself or the resident surgeons. We have had no recurrences and no strictures. In only two cases was there a failure of primary union, both in old people, with markedly sclerosed arteries. Two patients had fecal incontinence lasting six and fourteen days, respectively. At the present time both have perfect control. There has been no postoperative pruritus. Urinary retention requiring catheterization occurred in ten cases. Four patients were catheterized but once, the longest time that this assistance was required being seven times in four days. The average was three times in twenty-four hours, patients voiding voluntarily thereafter. For comparison, the postoperative record of five patients, operated on by clamp and cautery (3) and by ligature (2), shows that four of these five required catheterization, the longest time being three days, with an average practically the same as that given above. As an index of the postoperative discomfort, it is found that the amount of morphin or other anodyne given was less after the Whitehead than after the other operations.

DISCUSSION

Dr. J. H. Branham, Baltimore: The modern tendency seems to be away from the Whitehead operation, but there appears to be no good reason for this. Occasionally loss of control occurs from too long dilatation of the sphincter. The great advantage of the operation is that the whole field of work is under view.

Dr. Arthur Hebb, Baltimore: The method I use is to excise the hemorrhoids in the long axis of the bowel, suture the mucous membrane, dissect out the external veins, and put no sutures in the skin, allowing it to retract. No anodyne is necessary; the patient is up on the second day and the bowels are moved on the third. General anesthesia is frequently not necessary. No plugs should be used in the rectum, and there should be no forcible dilatation of the sphincter.

Dr. A. McGlannan, Baltimore: The Whitehead operation is simple, requiring usually only about fifteen minutes. Little blood is lost. The patient should not be allowed to get up too soon on account of the danger of embolus.

The Action of Certain Intestinal Antiseptics on Gastric Digestion

Drs. Julius Friedenwald and T. F. Leitz, Baltimore: Marked intestinal fermentation is not an uncommon accompaniment of certain gastric affections. Intestinal antiseptics are ordinarily employed to inhibit the growth of the intestinal flora to which this abnormal fermentation is due. It is, therefore, most important to determine whether by disturbing the gastric digestion certain antiseptics are not more apt to increase the fermentation than to lessen it. In these studies the gastric secretion of an individual with normal acidity, one with a hyperacidity, one with a subacidity, and one with a marked motor disturbance were investigated. The patient was given an Ewald test breakfast, the stomach was emptied as completely as possible and then washed with a definite quantity of water. In this way the total amount of contents remaining in the stomach can easily be ascertained, from which a fairly clear conception of the motor activity can be obtained. The gastric contents were then examined for the total acidity and the percentage of free hydrochloric acid. In order to make the result as accurate as possible, a number of examinations were made under uniform conditions and the results averaged. In each set of experiments the patient was first examined under normal conditions and then again after having taken the special intestinal antiseptic for a definite period of time (eight or ten days). The antiseptic was again given with the test breakfast. The following intestinal antiseptics were administered: salol, betanaphthol, bismuth salicylate, acetylsalicylic acid, ichthalbin, thymol, salicylic acid and creosote.

The following conclusions were arrived at: 1. Most intestinal antiseptics markedly interfere with gastric digestion. 2. This disturbance varies greatly with the nature of the gastric secretion and the motility of the stomach. 3. Salol and salicylate of bismuth are the least harmful to gastric digestion; betanaphthol, acetylsalicylic acid, ichthalbin, thymol, salicylic acid and creosote are more apt to interfere with gastric digestion.

Why Do We Get Our Cancer Cases Late?

Dr. E. B. Claybrook, Cumberland: It is still true that in many cases the practitioner, whether through a false ambition or through a foolish pride in wishing to make the diagnosis himself, dillydallies with the patient until the time passes for a radical operation with any hope for cure. A great step will have been taken when we learn to operate for purposes of diagnosis rather than for mere treatment alone.

DISCUSSION

Dr. L. J. Rosenthal, Baltimore: I do not believe that the physician is so negligent as he is sometimes accused of being. If a patient, for instance, has gastric symptoms, with coffee-ground vomit, etc., he is pretty apt to be turned over to the surgeon without much delay.

Dr. Emil Novak, Baltimore: Three stages may be described in the life history of cancer. The first, from the actual inception of the tumor to its recognition by the patient, we can hope to influence only by teaching patients to be on the lookout for certain suggestive symptoms; the second dates from this time to the period at which the patient seeks the advice of the physician, and it is in this stage that we can hope to accomplish most by popular education. The third stage lies between the recognition of the condition by the general practitioner and the surgical treatment which may be indicated. While education within the profession is of much importance, it can scarcely be said to be as vitally essential as education of the people.

Other Papers Read

The last session, on Thursday morning, April 27, was a joint meeting with the Baltimore Branch, American Pharmaceutical Association. An introductory address was delivered by Dr. William H. Welch, who reviewed the work of the Council on Chemistry and Pharmacy of the American Medical Association and other matters of joint interest to physicians and pharmacists. Dr. Samuel T. Earle, ex-president of the faculty, discussed the question of the professional relations existing between physicians and druggists. The workings of the Maryland Pure Food and Drug Law were discussed by Dr. Charles Caspari, Jr., the State Pure Food Commissioner. The defectiveness of the antinarcotic laws of the state was discussed by Mr. J. B. Thomas of the Pharmaceutical Association.

The following papers were also read: "Personal Experience with the Salvarsan Treatment of Syphilis," by Drs. A. Keidel and J. T. Geraghty; "Modern Otology and the Steadily Improving Prognosis in All Diseases of the Ear," by Dr. H. O. Reik; "Reversal of the Circulation as a Treatment for Raynaud's Disease and Senile Gangrene," by Dr. B. M. Bernheim; "Report of Case of Resection for the Cure of Ptosis of the Stomach and Colon," by Drs. J. C. Bloodgood and J. A. Chatard; "Clinical Use of Scarlet Red and Its Components in Stimulating the Epitheliation of Granulating Surfaces," by Dr. J. S. Davis.

MISSISSIPPI STATE MEDICAL ASSOCIATION

Annual Meeting, held at Jackson, April 10, 1911

(Concluded from page 1504)

Acute Hydramnios Complicated with Ascites

Dr. F. J. Underwood, Nettleton: This patient suffered from depression, dyspnea, etc. At five and a half months she was as large as if at term. Symptoms becoming grave, she was aborted and half a gallon of fluid removed. Recovery was complete. The cause is supposed to be an inflammation of the amnion, due to trauma, the patient's husband having kicked her in the abdomen two weeks prior to the trouble.

Uncinariasis a Factor in Puerperal Eclampsia

Dr. W. H. Rowan, Wiggins: In a series of cases of eclampsia a number of patients were diagnosed as hookworm subjects. All were young women subject to ground-itch. A number who were treated for hookworm nad no further trouble in subsequent pregnancies. South Mississippi is a highly infected district and the native women of that locality are peculiarly subject to toxemias and eclampsia. These cases usually occur in the country. Malaria as a factor is eliminated on account of its rare occurrence in this particular section.

DISCUSSION

Dr. J. R. Kitrell, Laurel: I know of several cases of uncinariasis in which the patient died of puerperal convulsions. Just how the anemia produces these convulsions would be interesting information.

Dr. I. E. Edwards, Canton. Does Dr. Rowan mean to condemn morphin altogether? My experience has been that that is the treatment *par excellence*. I should feel at a loss without morphin. I think if there is any one drug which should stand at the head of the list it is morphin sulphate. Of course, the thing to do is to empty the uterus thoroughly. In regard to hookworm; it may be that the parasite comes in as a secondary matter only.

Dr. L. D. Dickerson, McComb City: I think that we should all give morphin. The convulsions must be controlled, and I do not see how we can omit the use of morphin.

Dr. P. R. Brown, West Point: Those of us who have been in the practice of medicine a few years appreciate the fact that a large percentage of cases of eclampsia are due to anemia. It is quite possible that hookworm disease is a cause. I chloroform the patient and empty the uterus. The thing to do is to control the convulsions.

Dr. S. E. Eason, New Albany: Hookworm disease is a reality. Many of the malarial diseases will be shown to be caused by hookworm. In so far as I have been able to discover the cause of puerperal eclampsia, it is overburdened kidney and liver.

Dr. B. H. Booth, Drew: If these patients are under the influence of morphin it is harder to empty the uterus. The only deaths I have seen from puerperal eclampsia were in cases in which morphin was used.

Dr. J. T. Meek, Courtland: I give a good dose of calomel and sometimes use morphin. I should like to hear something about the use of tincture of veratrum.

Dr. B. F. McNeal, Ezra: In my practice morphin has not always failed. I have used it with success, and I would not condemn it absolutely.

Dr. W. H. Rowan, Wiggins: I wished to call the attention of this society to hookworm as a factor in eclampsia. As to the treatment of eclampsia, tincture of veratrum hypodermatically, in 30-drop doses, will control the convulsions. The objection to morphin is plain when we think of what is taking place in the system. By the use of morphin we merely delay the trouble; delivery has to be considered. It has been proved that chloroform is dangerous. I do not see why we should try to hasten the delivery.

Malaria as a Difficulty in Diseases of Children—A Plea for Its Eradication

Dr. S. S. Carothers, Duck Hill, discussed malaria as a difficulty in children's diseases and contended that we all are prone to consider malaria as an underlying element in febrile disorders in children and to give quinin, thereby causing additional disturbances. He condemned the indiscriminate use of quinin.

DISCUSSION

Dr. J. W. Barksdale, Winona: In my opinion, the practice of giving quinin indiscriminately is a most pernicious one. We should realize the importance of making more careful diagnoses. Use the microscope if it will be of use. We are not justified in giving quinin simply because the patient has malarial complications.

Dr. L. Kohlheim, Guntown: I come from a section of the state where there is much malaria. It requires several months to effect a cure; it is necessary to continue the use of quinin for from two to four months. It is hard to conceive how small doses can have a very harmful effect and it is also hard to see how the quinin can do much more harm than the disease.

Dr. H. L. Sutherland, Rosedale: I do not think that malaria is so prevalent as is believed. I am not a strong believer in malaria in spring in the Mississippi Delta. Because we want immigrants I think it wrong to say that we have malaria all through the winter. I make blood examination and if I do not find the parasite I do not give quinin and the patient will recover as well without as with it. It was once believed that malaria was a complication of typhoid but that idea has been practically discarded. Malaria is very rarely a complication of typhoid; and I think even less frequently is it seen in the pneumonia of children.

Dr. J. A. McCoy, Picayune: Dr. Carothers' idea is utopian. We must accept conditions as they are, not as they should be. I am afraid that quinin is a sort of red rag in Mississippi, and suggest that he modify his view a little in that way.

Dr. S. S. Carothers, Duck Hill: It was not my intention to advocate the elimination of quinin. I do not believe it possible to get rid of malaria without quinin but I do not think that quinin is the whole treatment. I believe that quinin in small doses is valueless in malaria. The constant administration of small doses merely serves to render the patient immune to its effects. We ought to have in this association a free discussion of means to eradicate malaria so that we may gather strength for the fight. We need it. In my paper I wanted to emphasize the idea that to get rid of malaria it will require concerted action. Two years of fighting by the physicians of the state would be required to get rid of it.

Surgical Aspects of Pyosalpinx

Dr. W. B. Johnson, Greenville: Pelvic diseases call for more surgical aid than the diseases of any other space in the body. The peculiar relationship of the tubes to the outer world accounts for much infection. There are two routes by which pus in the tube may be liberated. The vaginal is preferable in most cases.

DISCUSSION

Dr. J. G. Gaither, Oxford: One point that was not emphasized was the time at which to do this operation. It should not be done till the pus in the tube has become sterile. The iodin douche has proved of value. In my brief surgical career I have seen both the abdominal and vaginal routes used. I think I shall never use the vaginal route again. One cannot get complete drainage through the vagina with a large drainage tube, and I believe that the abdominal route is preferable.

Dr. I. E. Edwards, Canton: My experience would lead me to believe that dressing forceps would be better used in these cases.

Dr. W. B. Johnson, Greenville: The iodin douche is very valuable in this treatment, but it cannot be used if we use the tampon.

Six Cases of Mechanical Ileus

Dr. H. R. Shands, Jackson, reported six cases of mechanical ileus due to volvulus of ileum around a peritoneal band following a suppurative appendicitis in one case; to intussusception in two cases; to internal hernia and volvulus through omental rent in one case; to sponge left in abdomen at a former operation in one case; to adhesion of omentum to ulcerating tuberculous lymph nodes in lower lumbar region in one case. He suggested the prevention of a recurrence of intussusception by anchoring the cecum by its appendix, using the appendicostomy operation, having done this with good success in one of his cases.

Surgery of the Mastoid

Dr. L. C. Feemster, Nettleton: Nothing offers relief or hope of permanent cure in chronic suppurations of the middle ear but free incision and removal of the offending source. In operating there are two "touch-me-nots," the facial nerve and the lateral sinus. Patients frequently object to operation, not realizing the necessity, hence the surgeon should be very plain with them and explain the situation carefully and fully.

Cancer of the Uterus

Dr. J. H. Johnson, Brookhaven: We are too prone to wait until the diagnosis makes itself. More than 50 per cent. of uterine cancers reach the surgeon too late for operation. The solution of the whole problem rests in early diagnosis.

DISCUSSION

Dr. J. S. Ullman, Natchez: I believe in an early diagnosis and operation.

Dr. A. G. Hendon, Louisville, Ky.: This is a matter of great importance and is becoming more and more important. The methods of dealing with it are rapidly improving. Any discharge, whether it is bloody or not, from a woman past the menopause deserves a thorough investigation, and by that I mean a microscopic examination.

Dr. M. Holder, Memphis, Tenn.: There are five symptoms, pain, hemorrhage, offensive discharge, emaciation, anemia. If we wait for the five we will probably diagnose at a stage where it will be of no use. I think it is time that an educational crusade should be begun. Women do not know that between the ages of forty and fifty there is great danger of cancer. We cannot do anything beyond a radical operation. The most radical operation that has ever been done will not effect a cure in these advanced cases of cancer. The only thing left to us is an early diagnosis. We must educate the public, but how are we going to do it? We cannot tell each individual woman. The symptoms that we know are worthless. Any irregularity in the menstrual flow, even before menopause, should be looked into. Do not be deceived by the youth of the patient, though this is a middle-age disease.

Dr. J. B. Bullitt, Oxford: I wish to speak of the "patent-medicine" advertisements which are the cause of many women's deaths. We have allowed the public to go along in ignorance of these matters. There ought to be a regular campaign in the public press—a campaign of education. I think we ought to take up these matters and without prudery, and as soon as we can do so.

Dr. A. G. Payne, Greenville: Over a year ago I wrote to an editor of a paper in this state, a paper of large circulation—the *Issue*. In looking over this paper I cut out twelve advertisements for cancer cure, etc. I wrote the editor of the wrong he was doing in publishing these advertisements. I had a letter from him saying that he did not believe that all "patent-medicines" were good, but that a paper had to depend largely on the advertisements for its support. He said he had as much confidence in some of these as in some of the "M.D.'s," whose cards he published. We are being hampered by the press, and even by the religious press.

Dr. B. L. Cully, Jackson: I have recently had two cases which have forcibly impressed on me the fact that there is another great source of trouble along this line—I refer to the Christian Science cult.

Inguinal Hernia

Dr. John Darrington, Yazoo City, described various operations for inguinal hernia and advocated early interference. He illustrated the steps in the various operations by charts.

DISCUSSION

Dr. R. E. Howard, Durant: I have used ether in some of these cases.

Dr. H. M. Folkes, Biloxi: I should like to emphasize the importance of not pushing the intestine but rather pulling it. I have used hot applications successfully in cases in which cold applications failed.

Dr. M. Holder, Memphis, Tenn.: In strangulated hernia, even after six hours, the intestine has been known to become gangrenous. Taxis is a dangerous thing and particularly in strangulated hernia. It has been found that hernia is not a thing of to-day; it may have been developing for years, and on sudden exertion a sharp pain is felt and the protrusion is noticed. The introduction of catgut sutures has helped a great deal. It has been a wonder to me that not every man of 50 or 60 has had hernia. Straining at stool is a very important factor in developing hernia.

Dr. John Darrington, Yazoo City: The point made by Dr. Howard is an excellent one. Someone has properly said that you must get rid of the sac. There must be no depression left. Dr. Holder is right in his reference to taxis. I believe that whenever a man dies of strangulation some physician is responsible for his death. We should explain to and impress on the patient the danger of strangulation.

Acute Dilatation of the Stomach

Dr. J. A. Crisler, Memphis, Tenn., reported a case of acute dilatation of the stomach following operation and made some pertinent comments on this condition.

DISCUSSION

Dr. R. D. Sessions, Natchez: I believe that we shall accomplish a great deal of good if we wash the stomach immediately before the patient is taken off the operating table.

Conservative Treatment in Advanced Cases of Carcinoma of the Uterus

Dr. J. W. Barksdale, Winona, advocated the use of the cautery in advanced cases of carcinoma of the cervix. He has operated on five patients in this way, giving them great relief.

DISCUSSION

Dr. N. A. McLeod, Brookhaven: I have used the method suggested and probably prolonged life for a year or more. I have been so gratified by the good results that I expect to use the method again.

Dr. M. Holder, Memphis, Tenn.: The doctor does not propose to cure but only to prolong life and to make life more endurable. Cancers of the cervix are much more frequent than cancers of the fundus. Cancers of the fundus are followed by cures much more frequently than are cancers of the cervix. There are several reasons why cancers are not diagnosed. Some of this blame falls on the profession and some on the laity. The time will come when women will know all about cancer of the uterus and that is what we want as guardians of the health of the people. Ignorance on the part of the laity and modesty are some of the causes of the late diagnosis. Not only this, but the saying has gone about that cancer is incurable and that causes trouble. Some people want to be kept in ignorance of cancer. But we know that some patients are curable. Any deviation from the normal menstrual flow during the cancer age should be looked into; any change in the character of the flow should be looked into; any discharge coming on after the menopause; any pain in the pelvis; these are the symptoms. Pain in the pelvis is a rare symptom, I admit.

Dr. S. W. Johnston, Vicksburg, said that he knew of cases of cancer not confined to the cancer age.

Dr. J. W. Barksdale, Winona: I did not propose to convey the idea that any of these patients could be cured by a palliative operation but only that some comfort can be given. Frequently the patients have very great pain and foul discharges. Operation certainly does relieve this condition. I have seen cases in which if I had operated I could have prolonged life for some time.

Diagnosis of Some Common Diseases of the Hip

Dr. W. C. Campbell, Memphis, Tenn: We are too prone to diagnose a case as rheumatism. Pain in the knee is always very suspicious of tuberculosis of the hip. In these cases the treatment should be kept up for a long time, at least three years. He reported some illustrative cases.

The Duty of the State in the Conservation of Human Life and Energy

Dr. H. L. Sutherland, Rosedale: It is a difficult matter for our statesmen to understand that public health means public wealth. The medical association failed to get the last legislature to make an adequate appropriation for the prevention of disease in Mississippi, but the live-stock people got $40,000 to eradicate the cattle tick. This should be a consolation since it shows that the legislature is at last interested in some sort of conservation of health. A discussion of one great preventable and eradicable disease, tuberculosis, then followed. "As a business proposition, tuberculosis ought to be wiped out."

DISCUSSION

Dr. C. Kendrick, Kendrick: It has been the rule of Dr. Sutherland's life to uplift humanity. We should get to work. The way we shall have to work to get results is to work on the candidates for the legislature this summer. When we had yellow fever, a long time ago, physicians got together and worked on the candidates and were successful in getting what they wanted. The legislature appropriated money then because the people were stirred up. The state of Mississippi formerly appropriated $40,000. Now it should appropriate $100,000. Let us get to work for results.

Other discussion to the desirability of giving this paper to the press followed. The editor of the Jackson *News* requested it and offered the association 10,000 copies for educational campaign purposes. The offer was accepted and the *paper ordered published.*

Symposium on Malaria and Allied Conditions

Dr. B. F. McNeal, Ezra, reported cases of urticaria, muscular cramping and rigidity and "morning sickness" in a male, due to malaria and yielding to quinin.

Dr. B. H. Booth, Drew, gave the differential points between comatose malaria and heat-stroke, and reported several cases.

DISCUSSION ON MALARIA

Dr. J. D. Gilleylen, Jackson: We accuse malaria too much. Clean the people out and let them alone and they will be all right. We ought to use quinin as a stimulant.

Dr. B. H. Booth, Drew: I merely tried to show that we sometimes run across malaria which resembles heat-stroke.

Dr. J. D. Gilleylen, Jackson, in reply to a question as to how many people in the malarial districts do not have malaria, said: We have much malaria, I know. We shall continue to have it. But we shall find by the use of the microscope that many cases are not really malaria. I do not question the use of quinin in case of malaria.

Treatment of Uncinariasis

Dr. J. C. Culley, Columbia, described the method of using thymol in this condition.

DISCUSSION

Dr. C. C. Bass, New Orleans: I want to emphasize the importance of the treatment of ground-itch. Those engaged in the health campaign are in a position to distribute information and this is more important than the actual treatment of patients. People must be educated. Tell them that hookworm disease means ground-itch and ground-itch means hookworm disease. They know what ground-itch is and where they get it. Another thing worthy of emphasis is the importance of instructing the patients how to avoid hookworm disease after they have got ground-itch. If the patients are instructed not to swallow the material they are inclined to cough up they will not be so heavily infected. In 1904 I read a paper before this body wherein I made the statement that 50 per cent. of the rural inhabitants of the state were infected with uncinariasis; and now I see that the statement was a conservative estimate.

Dr. J. C. Culley, Columbia: The thing to do is to educate the children in the schools. We are treating a large number *of patients* now; but we must prevent more people from contracting the disease.

Other Papers Read

The following papers were also read: "Changes Undergone by the Brain as a Result of an Average Day's Work and in Consequence of Poisoning by Tetanus, Rabies and Such Gases as Carbon Disulphid," by Dr. Gustav Mann, New Orleans; "Normal and Abnormal Dentition," by Dr. S. A. Majure, Dixon; "Puerperal Infection," by Dr. O. N. Arrington, Brookhaven; "Twelve Months' Work in Obstetrics," by Dr. B. L. Culley, Jackson; "Gunshot Wound of the Abdomen; Amputation of Penis and Scrotum," by Dr. Julius Crisler, Jackson; "Complications of Lobar Pneumonia," by Dr. T. B. Holloman, Ittabena.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

Bulletin of the Johns Hopkins Hospital, Baltimore

May

1 Sir Richard Owen: His Life and Works. C. W. G. Rohrer, Baltimore.
2 A Florentine Anatomist (Leonardo da Vinci). P. Bailey, New York.
3 Embryology and Obstetrics in Ancient Hebrew Literature. D. I. Macht, Baltimore.
4 *Disseminated Caseating Tuberculosis of the Liver. W. S. Thayer, Baltimore.
5 A Peptid-Splitting Ferment in the Saliva. L. M. Warfield, Milwaukee, Wis.
6 Relationship Between the Normal and Pathologic Thyroid of Fish. J. F. Gudernatsch, New York.
7 *Tuberculous Bursitis. S. M. Cone, Baltimore.
8 *A Device to Aid in Keeping the Patient Dry After a Suprapubic Cystostomy. G. Walker, Baltimore.

4. **Tuberculosis of the Liver.**—In Thayer's case, the patient was a colored woman of 49, with a record of rather indefinite abdominal pain of a year's *duration* and *almost continuous* remittent or intermittent fever of a moderate degree, with sweating at night and progressive emaciation. Examination of the thorax showed little beyond the appearance toward the end, of rather diffuse râles throughout the lungs. During the last eight months of the patient's life there was a steady enlargement of the liver, which finally extended to a point 10 cm. below the costal margin in the right mammillary line. It was somewhat tender and very firm, and, on one occasion, slight irregularities of the surface were noted. The border which was distinct, seemed a little blunter in the right mammillary line. There was considerable anemia of a secondary type, but without leukocytosis, a persistent albuminuria and cylindruria without polyuria but with a rather low specific gravity, and, in the end, diarrhea with mucus and occult blood in the stools.

The progressively enlarging liver, the age of the patient, the anemia, the fever, which, after all, is common in hepatic neoplasms, all led toward this as a possible diagnosis, despite the fact that beyond the diarrhea with occult blood in the stools no suggestion as to the seat of a primary lesion was to be made out. The indefinite abdominal pain, tenderness and fever, together with the diarrhea occurring in a colored woman were strongly suggestive of peritoneal tuberculosis to Thayer, despite the absence of definite pulmonary signs, but the progressively and apparently great enlargement of the liver did not appear to him to depend on tuberculosis alone. He thought that a rolled up omentum might be adherent to the liver, thus increasing its apparent size, but the sharp border of the liver was against this. Syphilis was ruled out by the absence of a Wassermann reaction and by the fact that *antiluetic* treatment had been without result. The main possibilities as to diagnosis were hepatic neoplasm; amebic abscess of the liver; peritoneal and intestinal tuberculosis with a rolled up omentum adherent to the liver in such manner as to exaggerate its apparent size. At necropsy there was found a disseminated, caseating tuberculosis of the liver. The feature of the case, which is of special importance, is that such disseminated caseous tuberculosis of the liver should have given rise to a tumor sufficient to constitute the central figure in the clinical picture. It is also important to note that for a week at least during the course of this case there was *jaundice, a rare manifestation in hepatic tuberculosis.*

7. **Tuberculous Bursitis.**—The main interest in Cone's cases centers about their pathology—one representing the type of rice-body formation in a tuberculous bursa, the other a chronic sclerosing tuberculous process.

8. **A Device to Aid in Keeping the Patient Dry After Suprapubic Cystostomy.**—This device consists of a pure gum rubber sheet, one yard square, with a round hole in the center of from six to eight inches in diameter. The sheet is laid on the patient, next to the skin, so that the opening falls over the suprapubic wound. The usual amount of absorbent gauze is then laid on the wound; and the borders of the sheet are folded in, covering the gauze completely. The sheet with the

enclosed gauze is held in place by an ordinary abdominal binder or Scultetus bandage. By this arrangement whenever the gauze becomes saturated the fluid drains into the dependent portion of the sheet, where it collects and allows almost no leakage for several hours, during which time the patient's bed and clothing are kept dry.

Journal of the Oklahoma State Medical Association, Muskogee

May

9 Fractures of the Elbow. C. Blickensderfer, Shawnee.
10 Germophobia. A. K. West, Oklahoma City.
11 Diagnosis of Diseases of the Tongue. W. C. Cummings, Oklahoma City.
12 Treatment of Certain Infections of the Skin with Vaccine. W. H. Mook, St. Louis, Mo.
13 The Metric System Simplified. C. T. Scott, Oklahoma City.
14 Symptomatology and Diagnosis of Infantile Paralysis. L. J. Moorman, Oklahoma City.

Journal of the Medical Society of New Jersey, Orange

May

15 The Finished Operation with Respect to Those Done Below the Waist Line and within the Abdominal Cavity or Its Outlets. S. Chandler, Philadelphia.
16 Vaso-Repair. S. A. Cosgrove, Jersey City.
17 *Tuberculosis as It Concerns the Physician. L. F. Flick, Philadelphia.
18 Lesions of the Alimentary Tract. J. T. Pilcher, Brooklyn, N. Y.
19 *Recent Medical Advances, with Suggestions for Improvement of County and State Society Meetings. J. B. Wintersteen, Moorestown.
20 The Backward Child. C. H. Francis, Camden.

17. **Tuberculosis and the Physician.**—It is emphasized by Flick that to make a consumptive non-contagious is simple enough to the man who fully understands the subject and who is willing to direct his patient intelligently. Inasmuch as the contagion of tuberculosis is restricted to the broken down tissue which is given off and, perhaps, in some degree to the excreta, and, inasmuch as these are gross objects which can easily be seen, handled and controlled, all that is necessary is to devitalize them when they are given off without contaminating the individual who gives them off or the environment in which he lives, or at least to dispose of them in such a way that they cannot contaminate anything and cannot be brought back by any force in Nature to a person who might become infected. The only excreta which are at all likely to contain tubercle bacilli are urine and feces, and these are ordinarily deposited where the fermentation that is going on will sterilize them before they can be brought back to either human beings or animals. Practically, there is probably no danger whatever of new implantations in either human beings or animals from these sources. The chief seed supply for new implantations of tuberculosis, undoubtedly, is the sputum given off by people who have tuberculosis of the lungs, and it is this which needs to be looked after above all others.

19. **Recent Medical Advances.**—It is suggested by Wintersteen that one of the meetings of the county society be devoted to medical economics, and that another meeting be open to the public. Only when the public, which is dependent on physicians for protection from disease, is shown their disinterested motives, can physicians hope to gain the influence which is properly theirs. Also, as a means of securing favorable legislation and appropriations for sanitary purposes, such meetings would be invaluable. Finally, the importance of the education of the public school teachers on sanitation and hygiene should be urged on the proper authorities, the appointment of a member of the county society to deliver such lectures to the teachers at their county institutes should be suggested to them. This suggestion is both practical and valuable, as such an arrangement would undoubtedly be gladly welcomed and its good effects on both teachers and pupils cannot be overestimated.

Journal of the South Carolina Medical Association, Charleston

April

21 Importance of Maternal Nursing. W. F. Ashmore, Charleston.
22 Infant Feeding. J. C. Hill, Abbeville.
23 Surgical Interference and Irrigation of Colon in Pellagra. A. D. Cudd, Spartanburg.

West Virginia Medical Journal, Wheeling

May

24 Modern Surgery of the Kidney. J. Ransohoff, Cincinnati.
25 Is Anything the Matter with the Doctors? W. J. Robinson, New York.
26 Extra-Uterine Pregnancy. A. J. Kemper, West Milford.
27 *A New Sign of Tubal Pregnancy. W. W. Golden, Elkins.
28 *An Unusual Case of Superfetation (?). F. T. Ridley, Bluefield.

27. **A New Sign of Tubal Pregnancy.**—The sign found by Golden is this: A more or less striking paleness of the cervix. The absence of this paleness does not, he says, exclude tubal pregnancy, but its presence, when not due to obvious other causes, is almost pathognomonic. It is only present, however, in those cases of tubal gestation in which there is bleeding from the uterus, and only while this bleeding is actively going on. This sign, therefore, Golden considers as of value principally in the differential diagnosis from threatened or incomplete uterine abortion, but it is right here that the practitioner is in the greatest need of help.

28. **An Unusual Case of Superfetation.**—A woman, aged 28, has been married nine years and has two other children. She had a miscarriage in the latter part of 1909, and was curetted. Personal and family history was negative. When Ridley saw her, he noticed that she was badly jaundiced, and inquired as to her condition during the few weeks preceding. She said she had been feeling very well, with the exception of a decided feeling of lassitude, which she had never experienced before. Shortly before 5 a. m. he delivered her of a fine seven-pound girl baby, the placenta and membranes coming away in their entirety about half an hour later. He left the patient fairly comfortable, and when he saw her again about 11 o'clock, he directed treatment to relieve the jaundice. On Friday and Saturday, she complained of a bad odor about the bed, and also said she had not "felt her womb slip back into place." On Sunday evening, about 8 o'clock she was taken with severe labor pains, and passed a fetus and a placenta of about three months' development, in a fearful state of decomposition. After that, with appropriate treatment, she made an uneventful recovery.

Journal of the Michigan State Medical Society, Battle Creek

May

29 Surgical After-Treatment. A. W. Blain, Detroit.
30 Diagnosis of Gastric Ulcer. J. T. Watkins, Detroit.
31 Salvarsan. A. P. Biddle and R. A. C. Wollenberg, Detroit.
32 Diseases of the Thyroid. H. E. Randall, Flint.
33 *Stomach Disorders Requiring Intervention from the View-Point of an Internist. C. D. Aaron, Detroit.
34 Galvanism in Gynecology. E. Miller, Battle Creek.
35 Newer Methods for the Detection of Tubercle Bacilli, with Special Reference to the So-Called Antiformin Method. S. Ide and F. Smithies, Ann Arbor.

33. Abstracted in THE JOURNAL, Nov. 5, 1910, p. 1673.

Medical Record, New York

May 6

36 *Vaccine Therapy of Typhoid. W. H. Watters and C. A. Eaton, Boston.
37 Fibrillation of the Auricle. L. F. Bishop, New York.
38 Intravesical Irrigation in Acute Gonorrhea. M. Hünner, New York.
39 Perforating Wounds of Uterus. E. Lanphear, St. Louis.
40 The A-B-C of Ether Administration. P. J. Flagg, Yonkers, N. Y.
41 Value of Salvarsan. W. B. Trimble, New York.
42 *An Unusual Case of Placenta Prævia. Jacob Ohlbaum, New York.

36. **Vaccine Therapy of Typhoid.**—The authors refer to a report made to the hospital board on 140 typhoid patients. Some of these received vaccines sporadically, late in the course of the disease, in a relapse, or for some reason or other the treatment has not been given regularly. Excluding such there have been thirty-six persons who received the regular vaccine treatment in addition to the routine methods. At the same time seventy-one did not receive it. A study of these resulted in the following figures: Average duration of fever: untreated, 25.3 days; treated, 15.5 days. Average residence in hospital: untreated, 57 days; treated, 39 days. Percentage of reinfections: untreated, 25; treated, 9.1. Average gain by those treated: in duration of fever, 9 days; in residence in hospital, 18 days; in relapses, 15.9 per cent.

In the present paper they report their results during a more recent period with the intention of endeavoring to demonstrate the validity of their earlier claim that not only are vaccines innocuous, when properly used, but that their use confers distinct benefit on the patients, reducing the mortality, shortening the duration of the disease, and rendering relapse less liable. In all, thirty-five cases are reported. No aggravation or injury of any kind was demonstrable as a result of any inoculation. There has been a tendency to decrease the size of the dosage rather than to increase it, particularly in making the second and subsequent inoculations somewhat smaller than the first. The more serious the clinical conditions of the patient, the smaller the dose employed. This was apparently well borne out in one case that was considered to be all but hopeless. Here daily doses of one or two million bacilli were followed by gradual change for the better in the clinical symptoms.

42. **An Unusual Case of Placenta Prævia.**—In this case hemorrhages occurred at the seventh and eighth months of pregnancy. The patient was delivered by version after tamponade. Twenty-four hours later she had a chill and an abscess formed in the lower right portion of the abdomen; this abscess proved to be a gonorrheal salpingitis. After incision and drainage at McBurney's point the patient recovered.

California State Medical Journal, San Francisco

May

43 Management of Labor in Contracted Pelvis. H. J. Kreutzmann, San Francisco.
44 Cause and Treatment of Retrodisplacement of the Uterus. D. Hadden, Oakland.
45 Tuberculous Ulceration of the Rectum. W. H. Kiger, Los Angeles.
46 Rupture of the Liver. H. M. Sherman, San Francisco.
47 Skeletal Alignment and Muscular Balance in Their Relation to Pain, Function and Deformities. S. J. Hunkin, San Francisco.
48 Abdominal Myomectomy During Pregnancy. C. A. von Hoffman, San Francisco.
49 A Simple Tonsil Dissector. P. Sumner, San Francisco.
50 A Case of Thrombosis of the Central Retinal Vein. E. W. Alexander, San Francisco.
51 Xanthelasma. D. Friedlander and G. H. Mize, San Francisco.
52 Medical Notes Taken in South Africa. D. W. Montgomery, San Francisco.

Cleveland Medical Journal

April

53 *The Cardiovascular States and Treatment of the Failing Heart. L. F. Barker, Baltimore.
54 *Clinical Value of the Wassermann Reaction. R. Dexter and C. L. Cummer, Cleveland
56 *Id. W. C. Stoner, Cleveland.
57 *Value of the Wassermann Reaction from the Viewpoint of the General Practitioner. W. O. Osborn, Cleveland.
58 A Case of Ruptured Extra-Uterine Pregnancy; Streptococcus Infection of the Pelvic Cavity and the Ectopic Sac: Recovery. H. Robb, Cleveland.
59 *Four Cases of Sarcoma of the Nose and Throat Treated with Coley's Toxins. S. H. Large, Cleveland.

53. **Cardiovascular States.**—It is pointed out by Barker that any routine or schematic method of treating cardiac cases will, in many instances, be doomed to failure. In the therapy of cardiovascular disease, as in all other therapy, individualization must be the watchword, and the condition of the patient as the whole, not simply that of his heart and blood-vessels, must be studied carefully and the interrelation of the different organs kept in mind.

54. **The Wassermann Reaction.**—This report is a study of the results of 773 reactions made on 646 patients. A number of reactions have been repeated, a fact which should add value to the study. The authors examined seventeen individuals in perfect health in whom there was no suspicion of syphilis. All gave negative results. Furthermore, they had 163 persons suffering with diseases other than syphilis, in which syphilis could be excluded with reasonable certainty. All were negative, except one case of scarlet fever. This was examined during the acute stage, and was positive. The reaction became negative at a later period in the disease. Of nineteen cases of primary syphilis, sixteen were positive; three were negative but later became positive. In the secondary stage, the proportion of positive reactions reached from 95 to 100 per cent. With tertiary syphilis, positive reactions were secured in 90 per cent. of cases examined. So far as latent syphilis is concerned, the authors believe that in approximately 50 per cent. of the cases of syphilis considered cured, the infection is in temporary abeyance only, and may become active at any time. In a case of congenital syphilis, where the family history was absolutely negative, the reaction checked the clinical findings in spite of the history.

The authors would not regard the reaction as specific in the ordinary accepted sense of the term, as it depends on biochemical phenomena as yet not understood. In this climate, a positive reaction is a specific sign of syphilis in at least 99 out of 100 cases. In the residue, syphilis usually is not to be completely excluded. In other words, a positive reaction is a definite symptom, more definite than any previously at hand. A negative reaction carries much less weight. A single negative reaction cannot be taken as positive evidence against existing syphilis. With certain limitations, the more active the disease, the more likely is the reaction to be positive. The results of the reaction are of great assistance in treating syphilis but should be interpreted by one of experience with both the clinical and the serologic side of the question. The test can never supplant competent and exhaustive clinical observation but can aid it greatly,

56. **Clinical Value of the Wassermann Reaction.**—During a period of ten months, Stoner has tested 450 cases, making at least 800 tests. He has not found a positive reaction in every patient who gave a history of lues, but in every one in whom active manifestations were present a positive reaction has been found in the absence of recent therapy. On the other hand, he has not had a positive reaction in a single non-syphilitic condition. A constancy of the reaction has been found in cases in which observations have been made at different times. Positive findings have remained positive unless therapy was instituted, and negative findings have remained negative unless made negative by therapy, in which case they would become positive after the discontinuance of the therapy. Positive reactions have been found in a few obscure conditions in which a definite history of lues was not obtainable. In individuals treated over an extended period of time with protoiodid of mercury by mouth the reaction became negative after a course of treatment, but when therapy was discontinued for a month or two the reaction again became positive before clinical manifestations developed. Observations made in twenty-five cases classed as suspected lues, clinically diagnosed lues and non-luetic conditions showed 30 per cent. of positive reactions. Ten of these were clinically diagnosed lues with secondary and tertiary manifestations. Seven, with and without treatment, were found positive. In three, found negative, specific treatment was being carried out. One case clinically diagnosed chancroid was found positive. One individual being treated for supposed varicose ulcers had a few old scars on the face and arm but denied infection. A positive reaction was obtained and the headaches and body pains improved under iodid of potash and mercury. In a series of fifteen cases clinically diagnosed tabes and pseudotabes, 50 per cent. were found positive. Of 125 cases clinically diagnosed as primary, secondary and tertiary lues, tabes, paresis, progressive muscular atrophy, cerebrospinal lues, brain tumor, neurasthenia with indefinite history of soft chancre, paraplegia, hemiplegia, Hodgkin's disease, nephritis, arteriosclerosis, aneurysm; typhoid, pneumonia, pleurisy, cases of questionable diagnosis and normal cases, 24 per cent. were found positive. Positive reactions were not found in a single condition in which syphilis could be excluded. Ten selected cases of scarlatina in the second to the fifth week of the disease were found negative. Ten cases of diabetes mellitus were found negative. Observations made on thirty selected cases of incipient pulmonary tuberculosis were negative. Four cases of incipient pulmonary tuberculosis were found positive, two of which had clinical manifestations in the way of congenital earmarks and mucous patches in the throat that earlier were thought to be tuberculous. In twelve ward cases with various clinical diagnoses, two positive reactions were obtained, one of which proved to be cerebrospinal lues, and the other an obscure condition in

which lues could not be excluded. Thirty-five cases of idiopathic epilepsy, fifteen cases of dementia præcox, five cases of alcoholic insanity, manic depressive insanity and organic brain disease were found negative. In seventy-five cases of idio-imbecility; cretinism; Mongolian idiocy; microcephalic and macrocephalic idiocy; and feeblemindedness, in none of which was a history of lues obtainable, ten gave positive reactions: of these one patient was an idio-imbecile with congenital earmarks; eight others were imbeciles without luetic manifestations and one was a microcephalic idiot. In a series of eighty-one cases of general paralysis of the insane, 81 per cent. were found positive either with the blood-serum, cerebrospinal fluid or both. A positive Noguchi and Ross Jones globulin test was found in forty of the forty-five cases analyzed. Of the forty cases all gave a positive Wassermann and an average lymphocyte count of 35 per c.mm. Of the five cases found negative with the Ross, Jones and Noguchi tests a negative Wassermann was also found and the lymphocyte count gave an average of 10 cells per c.mm.

57. **The Wassermann Reaction.**—It is pointed out by Osborn that use should be made of the cerebrospinal fluid also in cases with nervous symptoms before resting reassured after a negative Wassermann with the blood-serum alone, for while an increased cellular content of the spinal fluid is, in certain cases, almost pathognomonic of a previous syphilis, if a positive Wassermann reaction with this fluid accompanies the lymphocyte increase it adds the finishing diagnostic touch.

59. **Coley's Toxins in Sarcoma of the Nose and Throat.**—In one of the four cases reported by Large, good results were obtained from the use of the toxins, the patient being alive three years after treatment. The original tumor was situated in the postnasal region, practically filling its left space. It had its origin from the periosteum covering the basilar process of the occipital bone. On microscopic examination, the tumor proved to be a round-cell sarcoma. In three months there was a recurrence; this time the growth was larger than ever, as it had now invaded the soft tissues of the nose. Practically the same operation, only more extensive than at first, was performed. Two weeks later (Jan. 12, 1908) injections of Coley's toxins were begun. Two months after the operation, a small growth, the size of a marble, was noticed in the old pharyngeal scar. The toxins were then injected directly into this growth every third day, with the result that the tumor entirely disappeared. On June 9, 1910, a small growth was found on the lateral wall of the pharynx. This was removed and proved to be a sarcoma. Injections were continued as before, and kept up until Dec. 3, 1910, when they were discontinued as there was no evidence of any return of the growth.

Illinois Medical Journal, Springfield

May

60 *End-to-End Anastomosis of the Abdominal Aorta, Using Absorbable [illegible] D. Lespinasse, G. C. Fisher and [illegible]
61 Treatment of [illegible] of the Pleura and Lungs. C. [illegible]
62 Diverticula of the Intestine. W. Cuthbertson, Chicago.
63 Salvarsan. C. Wagner, Chicago.
64 Mixed Phase of Manic-Depressive Insanity. W. L. Treadway, Jacksonville.
65 Inherited Syphilis. L. C. Pardee, Chicago.
66 Diphtheria. A. J. Butner, Harrisburg.
67 Removal of Appendix During Laparotomy for Other Conditions. A. Goldspohn, Chicago.
68 Are Reforms Necessary in the A. M. A. and Its Constituent Bodies? G. F. Lydston, Chicago.

60. A similar article appeared in THE JOURNAL, Nov. 19, 1910, p. 1785.

Kentucky Medical Journal, Bowling Green

May 1

69 Medical Ethics and Organization. W. R. Burr, Auburn.
70 Ptomain Poisoning. H. D. Rodman, Bardstown.
71 The Salicylates. T. J. Marshall, Bardwell.
72 *Diphtheria in an Institution. W. J. Thomasson, Newport.
73 Madstone. W. Blair, Glen's Park.
74 Erysipelas. W. A. Lackey, Hopkinsville.
75 Prostatitis. J. A. O. Brennan, Louisville.
76 Scarlet Fever. O. E. Senour, Union.
77 Management of Normal Labor. J. J. Adams, Munfordsville.
78 What Shall We Do with the Housefly? D. W. Gaddie, Hodgensville.
79 Significance of Albuminuria. W. F. Blackford, Louisville.
80 Treatment of Bronchopneumonia of Children. W. P. Drake, Rockfield.
81 Extra-Uterine Pregnancy. E. A. Harthill, Pewee Valley.
82 Abortion. W. W. Lasley, Lewisburg.
83 Indication and Contra-Indication for Chloroform and Ether. T. O. Helm, Bowling Green.

72. **Diphtheria in an Institution.**—The first case of diphtheria in this epidemic developed in less than forty-eight hours after a public gathering. Among the guests were people from a locality where diphtheria had been and was prevalent at the time. The health of the institution had been good and Thomasson was unable to trace the infection in any other way than by the contact of the visitors with the inmates. In sixty hours after the second case was discovered, every child (seventy-five) in the institution had an immunizing dose of 1,000 units. He used 85,000 units as single doses. Five adults had 2,000 units, this included the physicians. One child had 2,000 units, and five adults had 1,000 units. After the immunizing dose of 1,000 units no further cases occurred till the twelfth day, when a girl 21 years of age went down with the disease. This girl had not been exposed after receiving her immunizing dose of 1,000 units till on the eighth or ninth day after receiving the antitoxin. On this day she dressed a child after death (the only one in the series) and on the twelfth day after the protective dose developed the disease.

Ohio State Medical Journal, Columbus

May

84 Medical Ethics from the Viewpoint of a Layman. W. O. Thompson, Columbus.
85 Ten Cases of Rupture and Gangrene of the Gall-Bladder as an Emergency Condition. H. J. Whitacre, Cincinnati.
86 Cystitis in the Female. H. A. Baldwin, Columbus.
87 Test of Insanity in the Criminal Courts. W. A. Carey, Cleveland.
88 Indications for Operating in Cancer. G. M. Todd, Toledo.
89 Infant Mortality; Its Principal Causes; Prophylaxis. A. F. Furrer, Cleveland.
90 Medical Evolution; an Interpretation. D. S. Gardner, Massillon.
91 A Case of Bilateral Ophthalmoplegia Externa with Bulbar Symptoms. F. W. Alter, Toledo.

American Journal of Obstetrics and Diseases of Women and Children, York, Pa.

May

92 *Test of Labor in General and Hospital Practice. R. Peterson, Ann Arbor, Mich.
93 *Menstrual Disorders of Obscure Ori[illegible] H. C. Coe, New York.
94 Twenty-Five Cesarean Sections with [illegible]ren Fetal or Maternal Mortality. O. P. Humpstone, Brooklyn, N. Y.
95 A Case of Primary Ovarian Pregnancy. I. C. Rubin, New York.
96 The Chamberlens and the Obstetric Forceps. C. B. Ingraham, Denver.
97 Case of Torsion of the Normal Uterine Appendages. C. C. Norris, Philadelphia.
98 Pulmonary Embolism and Thrombosis from the Obstetric Standpoint. C. Foulkrod, Philadelphia.
99 Fibroids of the Uterus [illegible]ncy, Labor and the Puerperium. J. F. [illegible] D. C.
100 The Present Status of [illegible]arlington, New York.
101 Influence of the Midwife on Infant and Maternal Morbidity and Mortality. R. W. Lobenstine, New York.
102 *The Remedy for the Midwife Problem. J. C. Edgar, New York.
103 Gynecology and the Country Doctor. B. R. McClellan, Xenia, Ohio.
104 Delinquent Children from a Medical Standpoint. S. Block, Brooklyn, N. Y.
105 Atypical Aberrated Children. E. H. Bartley, Brooklyn, N. Y.
106 Abdominal Rheumatism. LeG. Kerr, New York.
107 A Study of Infant Mortality. I. J. Hill, New York.

92. **Labor in General and Hospital Practice.**—Peterson points out that it will make considerable difference in the practical application of the test of labor whether the patient be at home or in a well-appointed maternity. If in the latter, one need not wait so long, for operative treatment by skilled hands, when vaginal examinations have been reduced to a minimum and made under the strictest aseptic precautions, is a far different procedure as regards mortality and morbidity, than when similar surgery is performed in private residences. In the border-line cases of pelvic contraction the patient should be given every chance for spontaneous delivery before operative interference is instituted. Forceps should then be gently applied. In case of failure and in the presence of possible sepsis, it is far better to perforate the child rather than to attempt abdominal Cesarean section. In this way the chances are in favor of saving one patient. The abdominal operation, he asserts, means the loss of both in a large percentage of cases.

93. **Menstrual Disorders of Obscure Origin.**—*Inasmuch as in many cases of painful menstruation, the dysmenorrhea is not due to minor palpable changes in the uterus or ovaries, as is proved by the fact that they are not permanently relieved by operation,* Coe feels that the conclusion is forced on us that *such cases belong to the neurologist rather than* to the gynecologist. Hence the propriety of careful observation of the patient, a guarded prognosis, and less frequent resort to operation before fair trial has been made of local and general treatment.

102. **Remedy of the Midwife Problem.**—A general outline of the plan suggested by Edgar would *include the following* propositions:

1. The establishment of schools for *midwives* in such existing out-door maternity services as shall elect to do so.
2. *The establishment of out-door maternity services,* in connection with existing maternity hospitals which do not already possess them, for use as schools for midwives.
3. *In* each maternity service teaching *midwives*, the establishment of a school for midwives, with *teachers* appointed *especially for the* teaching of this class of pupil.
4. Rooms should be set aside for *lectures*, recitations, demonstrations, and drilling in *asepsis and* the examination of *pregnancy*. For this last patients applying for care during confinement should be utilized.
5. Time *not occupied in* attending cases of confinement in their own homes, *or in lectures, demonstrating, and so on,* could be used in witnessing operations *and confinements* in the delivery-room of the hospital proper.
6. The bulk of the instruction *should be given* by paid instructors in the patient's own home. Eventually the more intelligent of the graduate midwives *of* various nationalities could, with advantage, be *appointed* as instructors in the schools for *midwires.*
7. Text-books *for the* instruction and use of the midwives would naturally appear *as the* result of such teaching *as has occurred* on the continent of Europe.

Lancet-Clinic, Cincinnati

May 6

108 *Standardization of *Bacterins*. R. T. Pettit, Chicago.
109 Surgical Contra-Indications. B. M. Ricketts, Cincinnati.
110 The Research of the Practitioner. H. R. Alburger, Bloomington, Ind.

108. Abstracted in The Journal, Oct. 1, 1910, p. 1221.

Yale Medical Journal, New Haven, Conn.

March

111 *Use of Silver Wire for Fractures of the Patella. J. E. Root, Hartford, Conn.

111. **Silver Wire for Fractures of the Patella.**—Root is a firm believer in the operative form of treatment for fracture of the patella. Of the forty-three cases reported, he wired thirty-nine by the open method and four were treated by the ordinary means of external strapping and bandage. The result in all operative cases was early union and function. In the patients not operated on, the result was good functional recovery. *There* were no deaths in this series; no case of infection; and no case of removal of wire. Root emphasizes that fractures of the patella, *in which the capsule and* lateral ligaments are intact and fragments are not separated, can be successfully treated without operation. Fractures of the patella with wide separation of fragments, he would treat by the open method. Root uses silver wire of No. 16 caliber passed through the anterior two-thirds of fragments.

St. Paul Medical Journal

May

112 *Feeding in *Typhoid*. E. J. Abbott, St. Paul.
113 Present Status of Functional Kidney Tests. P. B. Cook, St. Paul.
114 Gall-Stones. T. Mann, Minneapolis.

112. **Feeding in Typhoid.**—Abbott advocates a more liberal diet and longer intervals between feedings.

Interstate Medical Journal, St. Louis

May

115 Treatment of Club-Foot in Infancy. D. Silver, Pittsburg, Pa.
116 *Management of Children Predisposed to Nervousness. L. F. Barker, Baltimore.
117 *Chronic Hypersecretion. J. A. Storck, New Orleans.
118 Perineal Prostatectomy: Its Preliminary Treatment and After-Care. J. R. Caulk, St. Louis.
119 Subconscious Phenomena. S. P. Goodhart, New York.
120 *Later Views on Pellagra. F. Eskridge, Atlanta, Ga.

116. This article was also published in the *Bulletin of the Medical and Chirurgical Faculty of Maryland,* March, 1911, *and was abstracted in* The Journal, March 18, 1911, p. 850.

117. **Chronic Hypersecretion.**—The necessity of viewing every patient with chronic hypersecretion as an initial case of gastrectasis, is emphasized by Storck, as also, the fact that the *primary* cause of the hypersecretion should be carefully looked for with the object of *instituting early and proper* treatment. In a patient under treatment, Storck interdicted *smoking. Rest and* quiet are advised. Methodical lavage with a quart of warm water containing a teaspoonful of bicarbonate of *soda* was *suggested before retiring, if nocturnal pain* and *vomiting* should *recur; otherwise* the lavage was to be *practiced* in the morning before breakfast. The following *prescription* was *ordered* to be taken after meals:

℞ gm. or c.c.
Pulveris radicis rhei .... 1|33 ʒi
Sodii bicarbonatis .... 8| or ʒii
Magnesia usta .... 14| ʒiiss
M. et fiat. pulvis.
Sig.—Half teaspoonful in water after meals.

For the pain, menthol *and* spirits of chloroform were prescribed. The diet advised *for the* present is to consist chiefly of whites of eggs, cream, olive oil and salt-free butter. If the condition continues to *improve, the diet is to be made* more liberal; but should food stagnation prove troublesome, *a competent surgeon is to be consulted.*

120. **Pellagra.**—Eskridge believes that pellagra is not essentially a corn disease *and that it may* be found *under conditions that absolutely eliminate corn from* the *possible causes.*

Memphis Medical Monthly

March

121 *Diagnosis *and Treatment of* Kidney *Stones.* W. S. Anderson, Memphis.
122 *Aids in the Diagnosis of Nervous Diseases,* with Special Reference to the *Reflexes.* W. G. Somerville, Memphis.
123 Aneurysms *of the* Abdominal *Aorta.* W. *T. Pride,* Memphis.
124 *Benign Tumors of the Uterus. E. M. Holder, Memphis.
125 Use of *Quinin* and Urea Hydrochlorate as a Local Analgesic. A. E. Cox, Helena, Ark.

Dominion Medical Monthly, Toronto

May

126 *An Unusual Complication of Small *Ovarian* Cysts. J. F. W. Ross and A. C. Hendrick, Toronto.
127 **A Skin Eruption in Six* Consecutive Cases *of Poliomyelitis.* A. G. Brown, Toronto.
128 Salvarsan. G. Chambers, *Toronto.*
129 *Membranous* Pericolitis. J. P. Kennedy, Wingham, Ont.

121 and 124. Abstracted in The Journal, *Dec. 10, 1910,* pp. *2090 and 2091.*

126. **Complication of Small Ovarian Cysts.**—In this case *a* subligamentous ovarian cyst was tightly bound down to the rectum and lateral pelvic wall by rather dense adhesions, compressing the iliac veins, both internal and external. The left leg was enormously congested and almost one-third larger than the right. The swelling extended from the toes to the groin. The interesting *feature in the case is that an* ovarian cyst about the size of an orange could cause so much obstruction, especially when one remembers how fluctuating *a cyst of that size* usually is. The explanation is purely mechanical, and the symptoms were due to the cyst being bound down in a most unusual manner by adhesions to the wall of the true pelvis.

127. **Skin Eruption in Poliomyelitis.**—The skin eruption described by Brown appeared in six consecutive cases and followed the same course in each case. In each of the six cases a vesicular eruption was present when the patient was first seen. The rash was typical, being present more or less all over the body, papular and vesicular, more especially on the lower extremities, anterior and posterior surfaces, and on the dorsum of the feet. The lumbar punctures, smears and cultures from the serum of the vesicles have shown no uniform results, while sections through the vesicles show the latter not to be deep-seated, as one would imagine on palpating them, but on the contrary, to be only superficial, i. e., between the malpighian and corneous layers of the skin; and apart from a little perivascular infiltration no other pathologic change could be found.

Mississippi Medical Monthly, Vicksburg

May

130 Apomorphin Hydrochlorate as an Antispasmodic. L. D. Harrison, Clarksdale.

American Journal of Surgery, New York

May

131 Stricture of Urethra: Why Stricture Is Less Prevalent than Formerly; Errors in Diagnosis. G. K. Swinburne, New York.
132 Dilatation of the Male Urethra, with Especial Reference to Mechanical Dilators. C. W. Bethune, Buffalo, N. Y.
133 Sterilization of Woven Catheters and Their Aseptic Conservation. M. W. Ware, New York.
134 Hydrocele. J. R. Alvarez, New York.
135 A Criticism of Bevan's Ligation of the Cord for Undescended Testicle. E. H. Eising, New York.
136 Case of Inguinal Ectopia Testicle Operated on After the Method of Bevan. L. W. Allen, San Francisco.
137 Clinical Peculiarities of Gonorrhea in Child-Bearing Women. B. C. Hirst, Philadelphia.
138 Supravaginal Hysterectomy in Double Gonorrheal Salpingitis. C. R. Hyde, Brooklyn, N. Y.
139 Criticism of the Technic of Ureteral Catheterization of Dr. Howard Kelly. A. H. O'Neal, Wayne, Pa.
140 *Two Cases of Extraperitoneal Transplantation of Ureters Into the Rectum for Extroversion of the Bladder. J. V. Arumugum, Bangalore, India.

140. **Transplantation of Ureters.**—Aug. 20, 1906, a boy, aged 18, was operated on for extroversion of the bladder and the ureters were transplanted into the rectum, according to the method advised by Peters of Jaranto. The patient was discharged from the hospital fifty-eight days after the operation. At the time he left the hospital he was able to retain urine in the rectum for about four hours during the day and for nearly nine hours at night. April 15, 1907, a boy, aged 13, had the ureters transplanted into the rectum for extroversion of the bladder and was discharged from the hospital three months after the operation. This patient was able to retain urine in the rectum for about four hours during the day and for nearly five hours at night at the time of his discharge. Feb. 16, 1911, the second patient was able to retain urine in the rectum for nearly six hours during the day, and was at times disturbed at night only once between 9 p. m. and 6 a. m. The first case of extroversion of bladder was last seen by Arumugum about three months ago, when the patient was able to retain urine in the rectum for from five to six hours during the day and for nearly eight hours at night.

Maryland Medical Journal, Baltimore

May

141 The Profession of Medicine and Its Relation to the State. F. B. Smith, Baltimore.
142 Financing of State Board Work. H. Harlan, Baltimore.
143 The Medical Fathers of Baltimore County, Maryland. W. J. Todd, Mt. Washington.
144 Bacterial Vaccines in Staphylococcus Infections. H. W. Stoner, Baltimore.

St. Louis Medical Review

April

145 *Cervical Ribs. R. E. Schlueter and A. F. Henke, St. Louis.
146 Progress of Genito-Urinary Surgery in the Last Twenty-Five Years. F. Kreissl, Chicago.
147 Treat Only After Making Your Diagnosis. F. R. Burdeno, Garrett, Ind.
148 Conjunctivitis (Ophthalmia) Neonatorum. S. H. Brown, Philadelphia.
149 Simplest and Best Treatment for Fracture of the Femur. R. Peter, Chicago.
150 Puerperal Sepsis or Mastitis. J. E. Dale, Fort Collins, Colo.
151 Case of Colon Necrosis. E. A. Babler and L. S. Luton, St. Louis.
152 Tabes Dorsalis and Excessive Venery. L. H. Mettler, Chicago.

145. **Cervical Ribs.**—In this case, the pressure of the supernumerary rib on the subclavian artery encumbered the heart in a somewhat similar manner as does an aortic stenosis, though to a much milder degree. And, although the difference in the radial arteries amounted to but 15 c.mm. of mercury, it produced an appreciable effect on a heart that had already to contend with another lesion.

Atlanta Journal-Record of Medicine, Georgia

April

153 Mayfield-Tyzzer Hospital for Men at Laichon Fu, China. J. M. Gaston, Laichon Fu, China.
154 The Social Evil: Its Prevalence and Results. R. R. Kime, Atlanta.
155 Obligations of the Medical Profession. F. Bradley, Atlanta.
156 Treatment of Anterior Poliomyelitis. T. Toepel, Atlanta.

New York Medical Journal

May 6

157 Analysis of Results Obtained in the Treatment of Syphilis with Salvarsan. J. A. Fordyce, New York.
158 Therapeutics of Syphilis. V. C. Pedersen, New York.
159 *Typhoid Cholecystitis. J. E. Summers, Omaha, Neb.
160 *Fatal Case of Hemorrhagic and Gangrenous Varicella. F. C. Knowles, Philadelphia.
161 *An Important Factor in Circulation. A. Rose, New York.
162 Cinematographic Demonstration of Normal Gastric Peristalsis and Its Importance in Diagnosis of Carcinoma of the Stomach. G. E. Pfahler, Philadelphia.
163 *Test Breakfast versus Fasting Stomach Contents. A. Goldman, New York.
164 A Possible Source of Error in Gastric Analysis. C. S. Fischer, New York.
165 Quinin and Urea Hydrochlorid as a Local Anesthetic. W. Green, Louisville.

May 13

166 *Universal Congenital Asthenia. C. L. Greene, St. Paul, Minn.
167 Study of Fats and Lipoids in Animal Tissue. J. Wright, New York.
168 *Nervous Affections in Relation to the Adjustments of the Eyes. G. T. Stevens, New York.
169 A Case of Typhoid Osteomyelitis Successfully Treated with a Vaccine. R. C. Rosenberger, Philadelphia.
170 Pupillary Disturbances in the Alcoholic Psychoses. F. M. Barnes, Washington, D. C.
171 Salvarsan in Syphilis. V. C. Pedersen, New York.
172 *A Bacteriologic Study of the Human Bile. P. F. Williams, Philadelphia.
173 *Visceroptosis, an Improved Abdominal Binder. H. Weinstein, New York.
174 Open Treatment of Fractures. W. H. Taylor, Port Arthur, Ont.

159. Abstracted in THE JOURNAL, Jan. 28, 1911, p. 299.

160. **Hemorrhagic and Gangrenous Varicella.**—The case reported by Knowles shows that there is probably a true form of hemorrhagic varicella, starting with the usual type of vesicles with clear contents, which some hours after their formation become filled with blood. However, it is a rare complication of varicella. The latter hemorrhagic vesicles may lead to the formation of gangrenous areas. The case of the author comes under this heading. The virulence of the infection and the resistance of the individual govern the hemorrhagic and gangrenous tendency. There is also a true form of varicella, in which the contents of the vesicles become purulent and may lead to gangrenous areas, but usually to the ecthymatous or impetigenous types. The term varicella gangrenosa should be applied only to cases of gangrene directly caused by varicella. The term dermatitis gangrenosa infantum should be applied to cases of gangrene in children, whether associated with varicella or not, if not directly dependent on that condition.

161. **An Important Factor in Circulation.**—Rose cites the case of an elderly gentleman suffering for several years from attacks of vertigo and unconsciousness. Almost daily, sometimes hourly, and even at shorter intervals, the alarming symptoms appeared. The frequency of the pulse was from 27 to 31 beats in the minute; only every second contraction of the heart caused pulsation. All the physicians who saw the case diagnosticated, quite correctly, myocarditic affection and treated him accordingly, but without success. The enormously distended abdomen of the patient had at first not been taken into consideration. The reduction of its size, although it did not cure the diseased myocardium, was followed by cessation of the attacks of vertigo and unconsciousness. The size and the weight of the abdomen having been reduced, the work of the heart was materially relieved to such an extent that even the imperfect contractions were sufficient to fill the brain with the necessary amount of blood. Rose urges that in cases of dyspnea and pulmonary hemorrhage caused by heart affection, one should apply the abdominal belt.

163. **Test Breakfast vs. Fasting Stomach Contents.**—While Goldman does not object to the test breakfast, he found that for diagnostic purposes in routine work, not only is pumping of the fasting stomach more convenient, but it is of much more value, even for absolute diagnosis, in some cases. The test breakfast in all the cases examined by Goldman was of no value at all, except where no free hydrochloric acid was found in the fasting stomach contents, and when the breakfast was given, it served only to substantiate the diagnosis previously made from the fasting stomach contents. In cases in which the breakfast was given and a diagnosis made on

that alone, after the fasting stomach was pumped, it had to be changed in many cases; while, if *fasting stomach contents* were obtained, the diagnosis was, as a rule, not changed after the test breakfast was given.

166. **Universal Congenital Asthenia.**—The clinical history of this condition is reviewed by Greene. Greene says that assuming with Stiller, who was the first to call attention to it, that a large number of persons are born asthenic and that this defect involves every structure and function of the body, one can readily follow his argument, which brings into one pathologic circuit a multitude of ailments hitherto regarded and treated as separate and distinct conditions. Among these are the so-called phthisical habitus, neurasthenia of the commoner type, certain apparent renal inadequacies, functional albuminurias, nephroptosis, enteroptosis, and that enormously predominant group of dyspepsia, known as the gastric neuroses. Stiller insists that an abnormally fluctuating or actually floating tenth rib (*costa decima fluctuans*) is almost pathognomonic of this condition, and this Greene believes to be true, though to him the general structural stigmata are even more interesting. There is absolutely no limit to the pain manifestations of asthenia. These may be such as to point to relaxation of the sacro-iliac ligaments, to chronic neuralgias, trifacial, sciatica, or what not, to uterine disease, gastric or duodenal ulcer, gall-stones, or derangements of almost any organ of the body, yet whatever the location and how great the intensity, they disappear like magic under rest and proper nutrition.

168. **Nervous Affections and Adjustments of the Eyes.**—In this paper Stevens considers facial expression as influenced by the adjustments of the eyes and as elements in the etiology of certain important nervous disturbances.

172. **The Human Bile.**—One hundred and one specimens of bile were studied by Williams, and, in addition, twelve calculi were examined. Of this number, organisms were recovered in eight cases, and from the calculi organisms were recovered in six instances. The organisms that were observed most frequently were those of the colon type. In thirty-seven, pure cultures of the colon bacillus were present, and, in association with other organisms, *Bacillus coli* was observed thirty-five times. The typhoid bacillus was recovered in two instances: one, in which typhoid fever had existed thirteen years previously, and in the second instance, from a person dying as a result of typhoid perforation. A very interesting observation was made regarding the presence of a large Gram-positive bacillus which was found in twenty-six cases. This organism was morphologically and tinctorially identical with the *Bacillus aeorgenes capsulatus*. This organism developed abundantly in the bouillon cultures where colon and other organisms developed, and in a number of instances anaerobic cultures.

173. **An Improved Abdominal Binder.**—This binder is built on the same principle as all the others having, however, as an extra enforcement six elastic straps, three of which arise from each side of the body of the binder. These straps cross posteriorly and when brought around to the front are buckled, thus affording additional support to the bandage. The tighter the straps are drawn the more snugly does the bandage hug the abdomen and there is no possibility of its loosening. The four lower straps push the abdominal wall upward and backward and retain it in that position. The upper two straps are made use of in stout individuals only.

Texas State Journal of Medicine, Fort Worth

May

175 Case of Increased Intraventricular Tension; Operation and Recovery. C. Venable, San Antonio.
176 Growing Disuse of Alcohol in Therapeutics. M. J. Bliem, San Antonio.
177 How the Roentgen Ray Aids Nature in the Cure of Intractable Skin Diseases. G. D. Bond, Fort Worth.
178 Case of Hereditary Ataxia or Family Ataxia. J. S. Turner, Dallas.
179 Posttyphoid Necrosis of the Thyroid and Arytenoid Cartilages. [illegible] M Morris, Galveston.
180 Ca[illegible] L. B. Jackson, San Antonio.
181. What the Gen[illegible]actician Should Know About the Eye. D. T. Atkinson, Dallas.
182 Indications and Contra-Indications for Curettage. C. M. Yater, Roswell, N. M.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London

April 29

1 Persistence of Disease Germs in the Human Body. Sir H. C. Cameron.
2 *Salvarsan and Arsenic Cancer. Sir J. Hutchinson.
3 *The Place of the Hospital in a Civilized Community. L. E. Shaw.
4 *The Syphilitic Factor in the Hemiplegias and Diplegias of Infancy and Childhood. C. R. Box.
5 Roentgen-Ray Therapy. J. R. Riddle.
6 Extensive Venous Infection Complicating Middle-Ear Disease: Thoracic Empyema: Recovery. N. Patterson.
7 Three Cases of Malignant Disease of the Spine. T. D. Luke.
8 Cases Under the Workmen's Compensation Act, and Others of Medicolegal Interest. L. A. Parry.
9 Radium Water Therapy. W. Armstrong.

2. **Salvarsan and Arsenic Cancer.**—On the basis of a long experience with arsenic, Hutchinson believes himself justified in stating that it is proved that the use of arsenic may create a proclivity toward malignant forms of growth. These are not by any means always the same; most conspicuous and frequent are epitheliomata, but they are not the only ones, for various forms of sarcomata and probably endotheliomata occur in the same connection, and possibly in the same individual. Since he became aware that arsenic gives proclivity to cancer, he has almost abstained from its employment, and would now advocate its use only in cases which very specially demand it. Hutchinson calls special attention to salvarsan in this connection.

3. **Place of the Hospital in a Civilized Community.**—Shaw's paper is based on four propositions: 1. That no community can regard itself as civilized which does not recognize a common duty to render medical assistance to those of its members whose conditions of health make such assistance necessary, and whose economic position does not enable them to secure it. 2. That it is undesirable for any civilized community, as at present organized, to provide without cost medical assistance for all its members regardless of their economic position. 3. That every civilized community should encourage its members to make provision by some method of mutual insurance against those insurable risks which without such assistance they are unable to meet. 4. That in every civilized community specialization of effort is essential to effective performance.

4. **Syphilitic Factor in Infantile Hemiplegia.**—The general consensus of opinion is that syphilis is not a general factor in the upper neurone paralysis of childhood, and this opinion appears to be based on very good grounds. Nevertheless, Box points out that a reconsideration of the part syphilis plays may be instructive and appears to be desirable for two reasons: First, because, in some cases at least, a permanent and crippling disability of both body and mind may be prevented by an intelligent anticipation of events; and, secondly, because, thanks to the methods of diagnosis perfected of late years, it may yet turn out that syphilis is a more important factor in the production of these paralyses than many have suspected. He refers to a considerable number of cases which he thinks are proof in favor of his views.

Lancet, London

April 29

10 Plague. Wu Lien-Teh (G. L. Tuck).
11 *Sensibility of the Gastro-Intestinal Tract in Health and Disease. A. F. Hertz.
12 The Microbic Factor in Gastro-Intestinal Disease and Its Treatment. B. Dawson.
13 *Cases of Advanced Tuberculous Joints Treated by Ileocolostomy. H. Chapple.
14 A Case of Lymphadenoma in a Woman Aged Sixty-Three. E. P. Stratford.
15 Two Cases of Acute Intussusception and Appendicitis. L. C. Martin.
16 The Septicemic and Pneumonic Plague Outbreak in Manchuria and North China. G. D. Gray.

11. **The Gastro-Intestinal Tract in Health and Disease.**—The experimental and clinical investigations of Hertz lead him to the conclusion that the view held by Ross is correct, and that disease of the alimentary canal may cause true visceral pain, which is often present alone, but may be associated with pain which is referred to the skin, muscles and connective tissue connected with the same spinal segments. In drawing

the conclusion that the viscera are insensitive, he says that Lennander and Mackenzie did not take into consideration the fact that a nerve-ending may be sensitive to one form of stimulation—the adequate stimulus—but insensitive to all others. Thus the adequate stimulus for the eye is light; for the ear sound, and so on, although in some cases there may be several varieties of adequate stimulus. All that was proved by Lennander and Mackenzie was that the viscera are insensitive to the particular stimuli which they employed. These stimuli were cutting, pinching and pricking, none of which occur under natural conditions. It still remained possible that the viscera would be found sensitive were the adequate stimulus employed. From a consideration of the common causes of visceral pain, it might be expected that tension on the fibers of the muscular coat would prove to be the adequate stimulus, and the observations which Hertz records confirm this view. A certain degree of distension leads to the sensation of fulness if the internal pressure is slowly raised; the same distension rapidly produced leads to the sensation of pain. Hertz believes that tension is the only cause of true visceral pain. Disease in the alimentary canal is often accompanied by pain due to its extension to the parietal peritoneum and sensitive subperitoneal tissue, to drag on its peritoneal attachments, as suggested by Lennander, and to reference to peripheral structures, in accordance with the views of Hilton, Lange, Ross, Head and Mackenzie. On the other hand, referred pain, which is the result of the arrival in the spinal cord of impulses from an internal organ, is comparatively rarely present alone, as the impulses from the internal organ generally themselves give rise to visceral pain. Lastly, pain originating in the peritoneum in connection with diseases of the alimentary canal is not uncommon in the absence of visceral pain.

13. **Tuberculous Joints Treated by Ileocolostomy.**—Following out Lane's suggestion and procedure, Chapple has done an ileocolostomy on patients suffering from advanced tuberculous joints, who showed the signs of intestinal auto-intoxication. In each case, the patient has gained in weight, and the tuberculous lesion has most definitely improved. He believes that these cases apparently prove the hypothesis that the route of infection of the tuberculous virus is via the intestine; that a tuberculous infection is only curable when reinoculation is prevented, and that advanced tuberculous lesions can be cured if the disposing cause is removed.

Australasian Medical Gazette, Sydney

March

17 Epilepsy. J. Bentley.
18 Rôle of the Bacillus Typhosus in the Etiology of Typhoid. J. B. Cleland.
19 Ulcerative Granuloma. E. S. Jackson.
20 Infective Granuloma. J. B. McLean.
21 Melena Neonatorum. G. H. Evans.
22 A Case of Intussusception Successfully Treated by Resection. B. Smeaton.
23 Glycosuria in Head Injuries. C. Douglas.
24 Salvarsan in Syphilis. A. E. Finckh and R. J. Millard.
25 A Handy Apparatus for Injection of Salvarsan. J. F. Flashman.
26 Two Cases of Infection by the Micrococcus Catarrhalis. J. W. B. Bean.

Indian Medical Gazette, Calcutta

April

27 Malarial Cachexia and Value of Arylarsonates in Treatment. H. W. Pierpont and H. W. Acton.
28 *Three Cases of Pseudomuscular Hypertrophy in One Family. R. H. Castor.
29 Jail Dysentery. W. Gillitt.
30 Bismuth Paste in Diagnosis and Treatment of Chronic Suppurations. F. P. Maynard.
31 Examination of the Feces for Ova of Intestinal Parasites. J. Taylor.

28. **Three Cases of Pseudomuscular Hypertrophy in One Family.**—The father and mother of the family and their ancestors were apparently healthy. The three children affected out of a family of ten, were the eldest boy, now 13 years old; a boy 5 years old, and another boy 17 months old. The poorly developed external genital organ was noticed in all the cases, especially in the eldest boy. The knee-jerks, especially in the second case, were slightly exaggerated. The superficial reflexes in all were normal and so were the sensory functions and sphincters. The pain on deep pressure was complained of in all the cases. The keloid character of the vaccination marks is a point to be noticed. The fifth, ninth and tenth children were affected. The father positively states that the other children, except the sixth and eighth, also showed signs of enlargement of their muscles when they were young, but this disappeared in two years. None of the children were mentally deficient, neither was there any indication of stammering in speech.

Australian Medical Journal, Melbourne

March

32 Vaccine Therapy. J. Smith.
33 Results of Vaccine Therapy. W. H. Summons.
34 Nature and Diagnosis of Sore Throat. S. V. Scholes.
35 Treatment of Sore Throat, with Special Reference to Diphtheria. C. V. Mackay.
36 Anteflexion and Uterine Hypoplasia. F. Meyer.
37 Action of Eserin on the Eye. J. W. Barrett and W. F. Orr.
38 Cases of Hydatid of the Lung Treated at the Children's Hospital from 1901-1910. R. M. Downes.

Journal of Tropical Medicine and Hygiene, London

April 15

39 Rôle of the Infective Granule in Certain Protozoal Infections as Illustrated by the Spirochetosis of Sudanese Fowls. A. Balfour.
40 *Three Unusual Necropsy Reports from British Guiana. E. P. Minett.
41 Occurrence of Esophagostomum Apiostomum as an Intestinal Parasite of Man in Nigeria. R. T. Leiper.

40. **Three Unusual Necropsy Reports.**—These cases were (1) hydatid disease of the kidney; (2) gumma of the spleen and (3) abscess of the spleen.

Annales de Médecine et Chirurgie Infantiles, Paris

April 15, XV, No. 8, pp. 241-272

42 *Epidemic Cerebrospinal Meningitis. R. Debré.
43 Rebellious Multiple Bone Lesions from Inherited Syphilis Cured by Single Injection of Salvarsan. M. Savariaud.

42. **Epidemic Cerebrospinal Meningitis.**—Debré has already published fourteen articles bearing on this disease, and he here reviews what is known in regard to prophylaxis. His research and what others have published show, he says, that fully 25 per cent. of the persons in the environment of a case of epidemic meningitis carry the germs without presenting signs of illness. In a schoolroom, for instance, where one of the children has had meningitis, a fourth of the children will be found to shelter the meningococcus in the nasopharynx. The diffusion of the germs is more marked the lower the hygienic level of the environment; in hospitals the carriers are very rare. The virulence and the distribution of the germs parallel each other. The meningitis may commence with a slight coryza and a coryza may develop after the disease. To date no measures are known which will effectually clear the air passages of the germs. Epidemic cerebrospinal meningitis is comparatively frequent, he says, in infants and is peculiarly difficult to diagnose in them as the onset is usually very insidious, commencing merely with torpor and symptoms of indigestion. This first phase is followed by a stage with a suggestion of meningitic symptoms, disturbances in pulse and respiration, tension of the fontanelles and a hint of rigidity of the back of the neck. This phase of half-suggested symptoms may last for a week or more, with intermissions and exacerbations, but then the complete clinical picture follows. If the infant recovers he is liable to develop normally thereafter, but incurable deafness or blindness may appear even during the course of the disease. Lumbar puncture is an important aid in differential diagnosis, but the prognosis is generally grave even under serotherapy. There may be evidences of ordinary serum sickness with intraspinal injection of the serum; and the meningitic symptoms may flare up again—special caution is necessary if there is anything to suggest anaphylaxis.

Bulletin de l'Académie de Médecine, Paris

April 11, LXXV, No. 15, pp. 477-493

44 *Albumin Reaction in Sputum. H. Roger.
45 *The Wassermann Reaction in Latent Syphilis. M. Letulle.

April 18, No. 16, pp. 494-521

46 Medical Affairs in French Indo-China. (Assistance, Hygiène, Epidémiologie en Indo-Chine, en 1909). Kermorgant.

44. **Albumin Reaction in Sputum.**—Roger has compiled from the literature and his own experience 1,638 cases in which the sputum has been tested for albumin, including 890 cases

of tuberculosis in the second or third stage, with negative findings in only one case, and certain features of the bacteriologic findings in this single case suggest the possibility of pseudotuberculosis. In 280 tuberculous patients in the first stage there were only two giving a negative reaction among those properly tested, and the diagnosis was made with some reserve in these. In 284 patients with non-tuberculous pulmonary or bronchial lesions a positive reaction was obtained in 144. The reaction is thus seen to be an important accompaniment to tuberculosis, its absence excluding tuberculosis with practical certainty, while its presence is not pathognomonic of this infection. All that is necessary for the test is to dissolve the sputum in water, coagulate out the mucus by adding a few drops of acetic acid, and then examine the resulting clear fluid for albumin by the usual procedures; the simplest, perhaps, is to heat the fluid after adding sodium chlorid. Examining the sputum for albumin is as simple and easy as testing for albuminuria, and the findings, Roger says, have equal diagnostic importance. Negative findings confirm the healing of old lesions and return of positive findings warns in time of a flaring up of an old tuberculous process. His experience has shown that when it is practicable to examine the elements of the albumin and determine the proportionate amounts of globulin and serin, this throws light on the prognosis, excess of the former being a favorable sign and preponderance of the serin unfavorable.

45. **The Wassermann Reaction in Latent Syphilis.**—Letulle made a practice last year of applying the Wassermann test in every obscure case whether there was suspicion of syphilis or not. The results brought many surprises, showing, for instance, that 25 per cent. of his patients with chronic nephritis were unsuspected syphilitics; also that unsuspected syphilis had evidently laid the foundation for cancer in three cases and for hemiplegia and paralysis, ophthalmoplegia, etc. In one case of a large cavity in one lung in an elderly woman, no tubercle bacilli could be discovered in the fetid sputum and the Wassermann reaction was positive. The findings were positive in 43 per cent. of the total ninety patients with chronic affections tested. Even without the test, syphilis was presumable in the patients with aneurysm, aortitis, tabes and paraplegia, but it threw unexpected light on many cases of hemiplegia, nephritis and cancer. A negative reaction has little significance but we can place almost absolute confidence, Letulle declares in conclusion, on positive findings. Reynier reports the case of a woman of 42, mother of two healthy children, who had been having stomach disturbances for a year, vomiting everything except milk; the liver was much enlarged and there was dulness below it. A cyst in the liver or cancer at the pylorus had been assumed, but before operating the Wassermann test was applied with positive findings and under mercurial treatment complete recovery soon followed. The Wassermann reaction also pointed the way to successful treatment of hemiplegia in the case of a woman of 45 with a healthy child and suspicion of inherited syphilis in the husband.

Bulletins de la Société de Pédiatrie, Paris

March, XIII, No. 3, pp. 105-151

47 Emotional Jaundice. (Cas d'ictère émotif prolongé chez un garçon de onze ans.) P. Nobécourt.
48 *Lymphocytosis in Cerebrospinal Fluid in Chorea in Children. Richardière, J. Lemaire and M. Sourdel.
49 *Constant Motor Symptom of Chorea: Dysdiadokokinesia. A. B. Marfan.
50 *Bronchial Glands and the Thymus. (Adénopathie trachéobronchique et hypertrophie du thymus.) E. C. Aviragnet.
51 *Thymectomy: Ten Cases. V. Veau.
52 *Bronchoscopy and Stenosis of the Trachea. G. Guisez.

48 and 49. **Organic Basis for Chorea.**—Richardière and Lemaire remark that the conflicting findings in the cerebrospinal fluid reported by various investigators may be explained by differences in technic. They found lymphocytosis constantly in the cerebrospinal fluid in five boys and ten girls between the ages of 5 and 14, all with typical chorea. In the one negative case in their experience, the choreiform disturbances finally proved to be a special neurosis in the young child of a mother who had had severe eclampsia at its birth. The lumbar puncture seemed to have a distinctly beneficial effect in some of the cases. The findings reported sustain the assumption of an organic basis for chorea in general. This applies also to the disturbance in the function permitting rapid alternation of movements as, for instance, alternating pronation and supination of the hand. Babinski calls this function diadokokinesia. Marfan states that it is constantly affected in chorea, and that even after apparent recovery persisting impairment of this function warns of impending recurrence.

50. **Enlargement of Bronchial Glands and Large Thymus.**—Aviragnet thinks that the symptoms attributed to hypertrophy of the thymus are in many cases merely the result of disease of the tracheobronchial glands compressing the nerves and entailing spasmodic phenomena without direct compression of the air passages. He gives an illustrated description of one such case in an infant of 16 months with stridor during inspiration, dulness over the upper part of the sternum, a retrosternal tumor perceptible during expiration, a radiographic shadow at the upper sternal region, and dyspnea only partially relieved by intubation even with a long tube—all pointing as supposed to hypertrophy of the thymus. Thymectomy was done, but the thymus was found small and intubation was necessary afterward as before. The child died in less than two weeks from suffocation after he had coughed up the tube. When the disturbance in breathing comes on after a bronchopneumonia or whooping-cough, disease of the glands is more likely to be responsible for the stridor than enlargement of the thymus, but with congenital stridor there is greater probability of the thymus being at fault. Marfan groups the cases of chronic dyspnea with stridor or wheezing in three classes: (1) stridor exclusively during inspiration, due either to congenital vestibulolaryngeal trouble or to paralysis of the dilators of the glottis; (2) stridor during both inspiration and expiration, predominating during inspiration—this is generally due to compression of the trachea by an enlarged thymus; (3) stridor exclusively or predominantly during expiration, the result of compression of the trachea or bronchi by enlarged glands. The sensation of a tumor when the finger is worked into the presternal notch may be due merely to glandular enlargement with a small thymus.

51. **Ten Thymectomies.**—Veau was able to cure four children with dyspnea from an enlarged thymus and more or less stridor, but in a case of congenital stridor a double operation on the thymus had no effect on the stridor while it cured it completely in another case. He operates only when dyspnea or suffocation seem to necessitate it, and even then he does not promise to cure the stridor by the thymectomy. In a case of recurring spasm of the glottis there were no further attacks for a month after the operation, but then they returned, very much less severe and they have gradually subsided entirely. He lost another little patient from spasm of the glottis, no operation having been attempted. He suggests the possibility that the parathyroids may perform the function of destroying a poison generated by the thymus—he knows of an instance in which a very large thymus was found in a child succumbing to spasm of the glottis. The principal source of error in regard to the thymus is the mistaking of enlarged tracheobronchial glands for the enlarged thymus. He had this experience in three cases, removing the thymus for compression of the air passages when this proved to have been the work of enlarged glands. Even when the glandular affection is suspected, if there is no involvement of the lung he would operate on the thymus to relieve dyspnea, but tuberculous pulmonary lesions, he reiterates, forbid an operation of the kind as it is liable to generalize the infection. This happened in one of his cases. Thymectomy has more than realized all expectations, he adds, when the patients are strong and otherwise well, with persisting dyspnea, with or without attacks of suffocation, and radioscopy confirms the assumption of an abnormally large thymus.

52. **Tracheobronchoscopy and Stenosis of the Trachea.**—Guisez' little patient was a child of 4 suffocating from compression of the lower third of the trachea by an enlarged gland; tracheobronchoscopy permitted effectual treatment.

Presse Médicale, Paris

April 15, XIX, No. 30, pp. 301-308

53 *Colpotomy. J. L. Faure.
54 *Hemolytic Streptococci in Puerperal Infection. D. Metzger.

April 19, No. 31, pp. 309-316

55 *Albumin Reaction in Sputum in Early Diagnosis of Tuberculosis. C. Ferreira.
56 Electro-Ionization in Chronic Gonorrheal Urethritis. R. Dupuy.
57 *Rôle of Hypophysis Cerebri in Nutrition. F. Dunan.

53. **Colpotomy.**—Faure reviews the various indications for incision of the vagina, with illustrations of the technic.

54. **Hemolytic Streptococci in Puerperal Infection.**—Metzger accepts the theory that streptococci rapidly inducing hemolysis on blood-agar are generally virulent, but that the non-hemolytic streptococci may also become virulent. When normal parturients have hemolytic streptococci in the lochia they should be kept under supervision and possibly isolated. The presence of hemolytic streptococci in the blood is almost invariably a bad omen.

55. **Albumin Reaction in the Sputum.**—Ferreira's experience with the albumino-reaction in the sputum confirms the general verdict in regard to it, namely, that negative findings exclude tuberculosis but that positive findings may be encountered occasionally in other conditions besides tuberculosis. (See Abstract 44, above.)

57. **The Hypophysis Cerebri in Relation to Nutrition.**—Dunan has been making an experimental study of the influence of hypophysis extract on the metabolism, weight, temperature, respiration, blood-pressure, toxicity of the urine and glycosuria. The extract was from horse hypophysis and rabbits were used for the experiments. The principal effect observed was a constant glycosuria, lasting for three or four days. The toxicity of the urine was also enhanced, the elimination of nitrogen diminished, and the animals all had diarrhea.

Berliner klinische Wochenschrift

April 17, XLVIII, No. 16, pp. 697-740

58 *The Curative Action and By-Effects of Salvarsan on the Ear. Heilwirkungen und Nebenwirkungen des Salvarsans auf das Ohr.) Haike and Wechselmann.
59 The Wassermann Reaction and Stern's Modification. M. Weichert.
60 The Wassermann Reaction and von Dungern's Modification. J. Kahn.
61 *Unreliability of Tryptophan Reaction in Stomach Content in Cancer. (Das peptidspaltende Vermögen des Mageninhalts.) L. Ehrenberg.
62 *Pathogenesis and Treatment of Cholelithiasis. P. Mayer.
63 Acute Perforative Appendicitis in Incarcerated Inguinal Hernia. L. Meyer.
64 Negative Experiences with Nucleic Acid in Treatment of General Paralysis. J. Loewenstein.
65 Improved Cystoscope. (Ein Cystoskop für Ureterenkatheter mit grossem Durchmesser.) E. Garceau.
66 Acoustic Test for Stomach Acidity. (Die akustische Salzsäureprobe mittels Natron und ihr Verhältnis zu der Brauseprobe von A. L. Benedict, Buffalo.) F. Fuld.
67 Resection of the Stomach. (Kritische Bemerkungen zu dem Artikel des Herrn *Pochhammer*: Beiträge zur Magenresection.) I. Boas, C. Pochhammer.

58. **Action of Salvarsan on the Ear.**—Haike and Wechselmann report the combined study of this subject by an internist and ear specialist, reviewing what has been written to date in respect to the action of salvarsan on the ear. The conclusions from their experience and those reported in the literature are that syphilitic disease of the ear is amenable to salvarsan in all its stages and in the inherited form. The salvarsan may benefit when the ear trouble has resisted mercury but it may likewise fail. The details of six cases are given, including a case of severe syphilis of the auditory nerve entailing deafness for two weeks, completely cured by the eighteenth day after salvarsan. Their experience has further shown that auditory disturbances may develop without salvarsan similar in every respect to those that have been noted after salvarsan treatment. It seems evident however, they say, that salvarsan modifies conditions so that manifestations of the syphilis usually restricted to the third phase may develop very early in the disease. Everything points to the assumption that the auditory disturbances observed under salvarsan are caused indirectly by the drug, at the point where the spirochetes are ensconced. Without the stimulation of the salvarsan, the spirochetes at these points probably would not have made their presence felt until a much later period. It is certainly an advantage, they declare, to be able to root out the spirochetes early in the disease instead of letting them lie latent for a long time and possibly do irreparable damage. Reports of seven cases of these by-effects on the ear after injection of salvarsan are appended. In five of the cases the auditory disturbances were cured by repeating the injection of salvarsan; in the others they subsided under mercury.

61. **Glycyl Tryptophan Test for Gastric Cancer.**—Ehrenberg reports research which seems to speak against the reliability of the peptid-splitting test, the findings varying from positive to negative in the same patient at different times in some cases and being negative in others with unmistakable gastric cancer and positive in simple anemia with cancer of other organs. He explains the reaction as due to the presence or lack of the normal acid secretion; acid checks the reaction.

62. **Gall-Stone Disease.**—Mayer advocates copious drinking of hot water to dilute the bile, with administration of sodium salicylate internally to act on the local inflammation, deep breathing to promote circulation of bile and bed rest as long as there is a trace of inflammation. Another important measure is to act on the sphincter between the common bile duct and the duodenum, coaxing it to open often and thus facilitate passage of bile into the intestine. This is accomplished by keeping the stomach often at work. When the chyme passes out of the stomach the sphincter opens to correspond; when the stomach is empty, bile ceases to pass into the intestine. This is the reason why frequent meals are better in gall-stone disease; at the same time it is important to refrain from overloading the stomach. There should be at least five meals a day, he declares, indigestible foods and those which putrefy and ferment easily being carefully avoided, as these, by irritating the stomach and compelling it to work too hard, induce reflex contraction of the gall-bladder and thus may start colic. Another reason for light meals is that the stomach is very often sympathetically affected in cholelithiasis. Very cold and very hot articles of food should be avoided for the same reason, but otherwise there is no *special* diet for gall-stone disease. Drugs to increase secretion of bile are not liable to be useful but rather to increase the trouble from pressure; dilution of the bile is much more rational. For this he recommends a glass or two of hot water an hour before breakfast and before retiring, with small amounts frequently during the day.

Correspondenz-Blatt für Schweizer-Aerzte, Basel

April 20, XLI, No. 12, pp. 417-448

68 *Functional Tests of the Heart. (Funktionsprüfung des Herzens.) R. Staehelin.

68. **Tests of the Functioning of the Cardiovascular System.**—Staehelin concludes this long review of the various methods of estimating the sufficiency of the heart and vessels with the statement that the pulse-rate after graduated muscular exertion is the only practicable method yet at our disposal for estimating the functional capacity of the heart. Even this does not show whether the disturbance is in the heart or in the vessels. To date, he says, there is no means for estimating the functioning of the arteries. If the efforts in this line so far have given no tangible results, yet they have thrown much light on the mechanism of the circulation.

Deutsche medizinische Wochenschrift, Berlin

April 20, XXXVII, No. 16, pp. 721-768

69 *Treatment of Frontal, Maxillary and Sphenoidal Sinusitis. (Behandlung der entzündlichen Erkrankungen der Nasennebenhöhlen.) G. Killian.
70 *Electric Investigation in Vertigo from Disease of the Internal Ear. (Untersuchungen über den Labyrinthschwindel und die elektrische Reizung des N. vestibularis.) F. Dyrenfurth.
71 Experimental Tuberculosis of the Iris and Chorioid in Rabbits. F. Schieck.
72 Gunshot Injuries from Medicolegal Standpoint. (Beiträge zur gerichtsärztlichen Beurteilung von Schussverletzungen.) G. Puppe.
73 *Characteristic Painful Point in Abdomen with Sciatica. (Ein Abdominaldrucksymptom der Ischias.) S. Gara.
74 Incision for Appendectomy. (Bauchdeckenschnitt bei Blinddarmoperationen.) Hackenbruch.
75 Complications Liable to Occur with Torsion of Pedicle of Ovarian Tumors. F. Gronarz.
76 *Successful Roentgen-Ray Treatment of Genital Tuberculosis. F. Spaeth.
77 *Alternating Treatment of Leg Ulcer. Althoff.
78 Case of Purgen *Poisoning*. E. Zabel.

69. **Sinusitis.**—Killian gives an illustrated description of the electric light bath for the head which he has found extremely useful in treating acute inflammations of the frontal, sphenoidal and maxillary sinuses. The four incandescent lights in the box shine directly on the face, the eyes being protected by a leather bandage. The patient breathes comfortably through a tube in his mouth; by a special contrivance the air is impregnated with moisture before it is breathed. The action of the active hyperemia thus induced is enhanced by small doses of sodium or potassium iodid, bed rest, and 0.5 or 1 gm. acetyl salicylic acid (aspirin) half an hour before the electric bath to promote sweating. He states that his experience with this method of treatment has been so extensive and so favorable that he regards it as far superior to any other. Recovery is complete under it in a week or two unless there is some obstacle in the nose to evacuation of the sinus. He warns against operative measures during the height of the inflammation. Only when the acute phase is past and the affection is becoming chronic is it safe to venture to resect the lower end of the middle turbinate. If the frontal sinus has to be opened it should be done from without. Radical operations should be reserved for old chronic cases and success depends on careful individualization and skill; great harm may easily result from the lack of either.

70. **Labyrinthine Vertigo and Electric Stimulation of the Vestibular Nerve.**—Dyrenfurth has the patient close his eyes and stand on one foot with the other knee bent at a right angle, supporting himself merely by the tip of a finger resting on the back of a chair, this position having been found a great improvement in the technic for electric tests of the auditory nerve. One electrode is held in the hand while the other pole is connected with a double electrode fitting over both mastoid processes. By this means an even current is passed from both sides through the region of the vestibular nerves, and the slightest tendency to loss of balance becomes at once apparent. Neurasthenic patients and those who have suffered from a traumatic shock to the brain (commotio cerebri) are most sensitive. Patients with unilateral labyrinthine disease fall toward the diseased side when the trouble is irritative, while they fall toward the opposite side in case of a tendency to atrophy of the nerve when stimulated with the anode, while the tendency to fall in these directions is reversed when the cathode is substituted. He gives the details of ten cases and reports further experiments on healthy subjects.

73. **Abdominal Tender Point as Symptom of Sciatica.**—Gara has found constantly in 118 cases of sciatica a certain symptom, which, he says, throws light on the etiology of the affection and explains the failure of treatment hitherto in many cases. The symptom was lacking in only 6 of his 124 patients with sciatica. It is an extremely painful point found by pressing the finger into the abdomen over the spinous process of the last lumbar vertebra, thus pressing on the nerve roots and the sacral plexus. Moderate pressure elicits severe pain on the side affected, while pressure at this point is not painful on the sound side and in the healthy. He locates the point a fingerbreadth below the umbilicus and two fingerbreadths to the side of the median line, pressing perpendicularly to the spine. The remarkable feature of this symptom is that, notwithstanding the sensitiveness of this point, the patients are not aware that anything is wrong there, never experience local pain at this point and never complain of abdominal pain except with much constipation, when feces accumulate and stagnate. A purgative will therefore aid in relieving pain from pressure of the distended large intestine on the sacral plexus, when the sciatica is on the left side; there is no opportunity for such pressure on the right side. Pregnancy may also lead to compression of the plexus. The pain from its compression is rarely felt at the point; it radiates down the sciatic nerve. This tender point in the abdomen indicates the methods of treatment from which we may anticipate good results.

76. **Tuberculosis of Uterus Cured by Roentgen-Ray Treatment.**—In the case reported by Spaeth a young woman had a severe tuberculous process in the internal genitalia which proved rebellious to repeated operative measures even after the lesion had been opened up and the region sutured to the skin. The hectic fever was continuous, the patient being reduced to a skeleton and unable to sit up in bed. As a last resort Roentgen-ray treatment was applied; it induced an intense local reaction, copious secretion, with reopening of the intestinal fistulas and the temperature rose still higher. He did not have courage to repeat the exposure until two weeks later and then continued the treatment with progressive benefit, until there had been eighteen exposures and a total of sixty-three minutes' exposure in five months; the patient returned in apparently perfect health after a summer in the country.

77. **Alternating Treatment of Leg Ulcer.**—Althoff has had far better results since he has introduced a system of alternately dressing the ulcer during the day with a salve containing 2.5 parts Peruvian balsam and 0.75 parts silver nitrate with 50 parts petrolatum, and then at night dressing the ulcer with a compress dipped in a 1 per 1,000 solution of bichlorid of mercury, not extending more than half an inch beyond the lesion, the whole being covered with a waterproof bandage. The ulcer is thus dressed twice a day by the patient; the whole leg is soaked in warm water for four or five minutes each time the dressing is changed. He cites a few cases to illustrate the efficacy of this alternating method, each of the applications supplementing the other and warding off possible injury.

Münchener medizinische Wochenschrift

April 18, LVIII, No. 16, pp. 833-880

79 *Exophthalmic Goiter. (Ueber den Morbus Basedowii.) A. Saenger.
80 Advantages of Early Operative Treatment in Exophthalmic Goiter: Thirty-Four Cases. P. Sudeck.
81 Hypersusceptibility in Relation to Infection and Immunity. (Rolle der Ueberempfindlichkeit bei der Infektion und Immunität.) A. Schittenhelm and W. Weichardt.
82 The Aphasia Question. (50 Jahre Aphasieforschung.—1861; 18. April—1911.) K. Heilbronner.
83 *Salvarsan in Syphilis. T. Schmidt.
84 *Clinical and Experimental Evidenc [illegible] Does Not Act on the Cornea. (Klinische u [illegible] tungen über das Verhalten des [illegible] W. Löhlein.
85 Butenko's Urine Reaction not Specific for Progressive Paralysis. H. M. Stucken.
86 *Superheated Air in Skin Diseases. (Heissluftbehandlung bei Dermatosen.) P. Esau.
87 Clinical Picture of the Plague by Lucretius and Livy. Schroeder and F. Kanngiesser.

79. **Exophthalmic Goiter.**—Saenger formerly explained this disease as a neurosis but has been converted to regard it as the result of perverted functioning of the thyroid. He is sustained in this view by the benefits from surgical treatment, by the development of exophthalmic goiter in consequence of acute inflammation of the thyroid, an occurrence which he has witnessed himself several times, by the manifestations of the so-called secondary Basedow syndrome, and lastly, by the fact that recurrence of the goiter is accompanied by return of the Basedow symptoms. The importance of acute infections in the etiology of exophthalmic goiter is often overlooked. Palpitations of the heart are usually the first symptom, the thyroid not becoming enlarged until later. The exophthalmos is generally bilateral. In his ninety-seven cases six of the patients have died, two after thyroidectomy, the four others from the heart disturbances and weakness. The first measure in treatment is change of scene and if possible of occupation. A course of rest and forced feeding alone may restore the earning capacity. The symptoms became aggravated under thyroidin treatment in his experience. In two cases improvement followed Roentgen-ray treatment, but there was no benefit in another case. He advises a course of internal treatment at first; if after a reasonable time the earning capacity is not restored, he calls in the surgeon. If the condition grows bad again in the years after an operation, instead of ascribing the aggravation to the operative measures, he orders still more of the thyroid to be removed. Operative treatment is especially indicated for working people as the earning capacity is more promptly restored.

83. **Salvarsan in Syphilis.**—Schmidt reports a few unfavorable experiences in the course of salvarsan treatment of 250

syphilitics. In one tabetic, progressive paralysis developed four days after the injection, the entire domain of the sciatic nerve being paralyzed for a time, but at present a peroneus paralysis is all that is left of the trouble. Peroneus paralysis also developed after injection of salvarsan in the early stage of syphilis in another case, the paralysis having been preceded by two weeks of severe pain in the whole leg. Two of his patients have since died, one from cancer metastasis in the brain; the other, a tabetic, died three weeks after the injection which had been borne without disturbance. In neither case, he states, could the salvarsan be incriminated in the fatality.

84. **Inefficacy of Salvarsan in Syphilitic Keratitis.**—Löhlein reports that no benefit was apparent in the nine cases of syphilitic parenchymatous keratitis in which he applied salvarsan; the involvement of the other eye was not prevented. Even supplementary threefold subconjunctival injection of 0.01 gm. salvarsan failed to arrest the corneal lesion. The failure of the drug in these cases cannot be ascribed to nonpenetration of the drug into the cornea as he demonstrated by experiments on rabbits with both subcutaneous and intravenous injection of the drug.

86. **Superheated Air in Treatment of Skin Diseases.**—Esau urges the more general application of superheated air in treatment of dermatoses, declaring that it should at least be given a fair trial before starting a tedious, complicated course of treatment. The way it stops the itching is its most grateful effect while in treatment of weeping and scaling skin affections, he says that it is at least as effectual as other measures at our command. He uses the hot-air box, with the hot-air douche only when it is impossible to apply the hot-air box to the region. One specially interesting feature of the treatment is the way in which, when one patch is exposed, other patches seem to feel the benefit, too, and display an evident, though milder, reaction.

Wiener klinische Wochenschrift, Vienna.

April 13, XXIV, No. 15, pp. 519-554

88 Protecting Powers of the Cells. (Die Schutzkräfte der Zellen.) E. Pribram.
89 Further Experimental Research on Anaphylaxis. (Ueber die Zuverlässigkeit des Peptonnachweises als Abbaureaktion bei der Anaphylaxie.) F. Schenk.
90 *Case of Extensive Tuberculosis of Mediastinal Glands. (Beziehungen der Lymphdrüsentuberkulose zur Hodgkinschen Krankheit.) O. M. Chiari.
91 *Diagnostic Importance of Tubercle Bacilli in Stools. (Diagnostische Verwertbarkeit des Tuberkelbacillennachweises in den Fäzes.) F. Rittel-Wilenko.
92 *Treatment of Writer's and Player's Cramp, etc. (Zur Therapie der koordinatorischen Beschäftigungsneurosen und über Autogymnastik in chronischen Fällen derselben.) M. Benedikt.
93 Isolated Fracture of the Carpal Bones. (Isolierte Karpalknochenfrakturen.) A. v. Posch.
94 Syphilis of the Ear. (Zur Frage der Erkrankungen des Akustikus und des Labyrinthes bei erworbener Lues.) O. Mayer.

April 20, No. 16, pp. 555-582

95 Action of Ultraviolet Rays on Albumin Antigen and Its Antibody. (Wirkung des ultravioletten Lichtes auf das Eiweissantigen und seinen Antikörper.) R. Doerr and J. Moldovan.
96 *Presence of Cholesterin in the Blood of Pregnant Women. (Cholesterinesteremia.) L. Aschoff.
97 Comparative Serologic Tests in [illegible]lis and Leprosy. (Peptone Reaction.) [illegible] Tuberkulose, Lues und Lepra.) R. [illegible]
98 Atoxyl in Tuberculosis. (Einige Fälle von Atoxylbehandlung der Tuberkulose.) B. Knothe.
99 Toxic Action of Typhoid Effusion on the Circulation. (Untersuchungen über die Giftwirkung von Typhusexsudaten auf den Kreislauf.) E. Hoke.
100 *Insurance Statistic[illegible] Study of General Public Health ([illegible]ierigkeiten bei der Verwertung der [illegible].) L. Teleky.

90. **Connection Between Glandular Tuberculosis and Pseudoleukemia.**—In the case reported the presumptive diagnosis had been primary carcinoma of the right bronchus with a metastatic tumor in the glands. Necropsy disclosed that the trouble was a tuberculous tumor involving the glands, compressing the bronchi and involving their walls and the pleura, plus caries of ribs and extensive tuberculosis of the lymph glands—the whole picture suggested Hodgkin's disease. The resemblance was the more striking on account of the way in which the tuberculous processes had invaded adjacent organs, as in malignant disease.

91. **Tubercle Bacilli in the Stools.**—Wilenko has examined recently the stools in every case of tuberculosis and tabulates the clinical and necropsy findings in fifty-four cases. They show that tuberculous processes may exist in the intestines without any manifest symptoms; whenever tubercle bacilli were found in the stool, tuberculous lesions were evident in the intestines at necropsy. Intestinal lesions proved to be far more common than was surmised from the course of the cases. Two patients had no tubercle bacilli in the stools on repeated examination, notwithstanding extensive pulmonary lesions, and the intestines were found intact in these cases.

92. **Treatment of Occupational and Other Coordination Neuroses.**—Benedikt comments on the great curative value of local injection of a 2 per cent. solution of phenol in treatment of writer's cramp and other occupational neuroses. No one else, he says, seems to have realized the importance of this simple measure, although he has advocated and practiced it for years, and he has never known it to fail, even in old chronic cases. Tender points can always be found in the tendons of the wrist or hand, or in the heads of the tendons in the elbow or shoulder in these cases of occupational coordination neuroses, and injection of the weak phenol solution at the tender points speedily restores conditions to normal. He explains the trouble as a central coordination neurosis, a reflex affection which can be checked and cured by curing the original source in the tendons and muscles which sets up the mischief. These neuroses are particularly common among piano students and professional players and they put an end to all instrumental playing for the time; a few injections at the tender points, however, cure the underlying disturbance and with it the neurosis vanishes. In one recent case of the kind, the tender point was found in the bend of the elbow. Injection here caused a slight anesthesia in the domain of the ulnar nerve, but it restored the use of the hand so the patient was able to give a concert the week after. In the chronic cases, massage of the nerve may be useful, and he has obtained good results with massage applied crosswise to the nerve, as a guitar string is played.

96. **Cholesterinemia in Pregnant Women.**—Aschoff reviews recent research which has thrown light on the formation of cholesterin stones. It seems that cholesterin is liable to be deposited whenever there is obstruction to the free flow of bile. Any stagnation of bile is thus liable to entail formation of a cholesterin stone, and conditions during a pregnancy almost inevitably interfere more or less with the free outflow of bile. This explains the "cholesterinesteremia" in the pregnant woman to which Neumann and Herrmann among others have recently called attention. It also suggests that the seed for cholelithiasis is planted in many cases during a pregnancy, the primary cholesterin stone growing by concretion and the irritation from it later leading to infection and the whole train of gall-stone disease. Aschoff is inclined to believe that there is increased production of cholesterin esters under the influence of the pregnancy and that they accumulate at various points, an actual cholesterin-steatosis.

100. **Difficulties in Drawing General Conclusions from Statistics.**—Teleky calls attention to the report recently published by the Leipsic sickness insurance company, the data in which cover 1,284,676 persons under observation during one year, with tabulation of the details in respect to sex, age, occupation, sickness, etc. Over $80,000 was appropriated by the Reichstag in 1903 for the work, the Leipsic *Krankenkasse* being the only one that had kept its books with sufficient detail for the purpose. Teleky warns that while this work will supply a basis for further research in many directions, general conclusions based on the statistics are almost certain to be fallacious as so many factors have to be taken into account. He shows the danger of this by a number of concrete examples.

Zentralblatt für Chirurgie, Leipsic.

April 22, XXXVIII, No. 16, pp. 565-596

101 Operative Treatment of Aneurysm of the Carotid Artery. F. Weber.
102 *Convulsions After Orthopedic Operations. (Krampfanfälle nach orthopädischen Operationen.) K. Gaugele.

102. **Convulsions After Orthopedic Operations.**—Gaugele has had two cases of this kind similar to the ten reported by

Schanz, summarized in The Journal, Feb. 12, 1910, page 576. Schanz explains the convulsions as due to fat embolism, but Gaugele says that the symptoms are by no means those of fat embolism and Codivilla, whose article was summarized in The Journal, Dec. 4, 1910, page 2277, also rejects the assumption of fat embolism as the cause of the convulsions after orthopedic operations. In Gaugele's two cases the convulsions developed four or five days after reduction of congenital dislocation of the hip joint in children of 7 and 9. The convulsions kept up for a day or two; the pupils were rigid but there was no fever and both patients recovered. The children seemed to be doing well until the rest of the family came to see them, the visit being full of excitement and weeping and the family staying three hours, long past the allowed time. The epileptiform convulsions developed almost at once after the excitement of the visit, and since then Gaugele refuses to allow any visits from friends until two weeks after the operation and he has had no further disturbances of the kind, not even in the severest cases, with children up to 10 or 15 years old. Schanz ascribes a great curative effect to saline infusion, and Gaugele found it beneficial, although he does not accept Schanz' explanation for this. In another case the symptoms indicated actual fat embolism; soon after the operation (correction of paralytic club-foot), there were intense pains in the abdomen and heart region with vomiting, irregular and rapid pulse, pallor and a distressed expression, although the patient was tranquil. After subcutaneous injection of 200 c.c. of salt solution, the symptoms subsided and by the end of two hours the condition was normal.

Zentralblatt für Gynäkologie, Leipsic

April 22, XXXV, No. 16, pp. 609-640

103 Improved Technic for Cesarean Section. (Zur weiteren Verbesserung der Kaiserschnittstechnik.) J. Veit.
104 Progress Forward or Backward? (Neuerung oder Fortschritt?) M. Hofmeier.
105 *Hypnosis. (Nochmals die Hypnose.) J. Kocks.

105. **Hypnosis.**—Kocks presents further arguments to sustain his assumption that hypnotic seances have never been genuinely scientific.

Gazzetta degli Ospedali e delle Cliniche, Milan

April 6, XXXII, No. 42, pp. 443-450

106 Origin of Ossifying Myositis. U. Fabris.

April 9, No. 43, pp. 451-466

107 Exogenous and Endogenous Metabolism. F. Bottazzi. Commenced in No. 40.
108 *Alcoholism and Tuberculous Peritonitis. P. F. Arullani.
109 Pathologic Anatomy of the Beard. (Alcune anomalie dei peli del mento.) S. Giovannini.

April 13, No. 45, pp. 475-482

110 Autoserotherapy. C. Garmagnano.

108. **Alcoholism and Tuberculous Peritonitis.**—Arullani practices in a vine-growing region in Italy where the inhabitants drink wine almost exclusively, the alcohol content ranging from 13 to 15 per cent. Notwithstanding the pure air, robust constitutions and absence of poverty in the region, cirrhosis of the liver and all forms of tuberculosis are remarkably prevalent. He thinks that few regions can show so emphatically the close connection between alcoholism and tuberculosis. In a case described in detail, fatal ileus developed in the course of chronic afebrile tuberculous peritonitis in a man of 35.

Policlinico, Rome

April 9, XVIII, No. 15, pp. 453-484

111 Vitality of Cholera Vibriones in Water. F. Piccininni.
112 Dry Sterilization of Catgut. E. Lay and G. de Pascalis.

April, Medical Section No. 4, pp. 145-192

113 Congenital Malaria. P. Sabella.
114 Spontaneous Typhoid in Goats. (L'infezione spontanea nelle capre da bacillo di Eberth.) F. Scordo.
115 Experimental Paratyphoid Infection in Goats. (L'infezione sperimentale da paratifo B nelle capre.) F. Scordo.
116 Metabolism of Nitrogen and Urea in Gout. (Contributo sperimentale alla conoscenza del ricambio azotato ed urico nella gotta.) P. Pontano. Commenced in No. 2.

Ugeskrift for Læger, Copenhagen

April 13, LXXIII, No. 15, pp. 511-544

119 Campaign Against Tuberculosis in Denmark During the Last Ten Years. H. Rørdam.
120 Nature of Cancer and Vaccine Therapy. (Kræftens Natur og Behandling.) C. Otto.

Hygiea, Stockholm

March, LXXIII, No. 3, pp. 257-384

117 Cesarean Section. (Några ord i kejsarsnittsfrågan.) Lundblad.
118 *Gastric Endothelioma. (Till ventrikelendoteliomernas kasuistik.) V. B. Jörgensen.

118. ***Gastric Endothelioma.***—Jörgensen reviews four cases—all he has been able to find in the literature, and then report a fifth. His patient was a woman of 56 and she is in good health to date, ten months after resection of nearly half of the stomach. The tumor projected fully 4 cm. into the stomach and around the base measured 19 cm. Diarrhea had been the first symptom a year before the operation. Oppression and pain in the stomach had been noted for two or three months.

Books Received

Books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. Selections will be made for review in the interests of our readers and as space permits.

1. Studies on Plague in Ground-Squirrels (in Four Parts). Part I. Pathology and bacteriology of Part II. Notes on induced plague in Immunity of certain squirrels to plague transmission in relation to plague among ground-squirrels. 2. A Plague-Like Disease of Rodents. By George W. McCoy, Passed Assistant Surgeon. Hyg. Lab. Bull. 43, U. S. P. H. and M.-H. S. Treasury Department, April, 1911. Paper. Pp. 75, with illustrations. Washington: Government Printing Office, 1911.

Tuberculosis as a Disease of the Masses and How to Combat It. Seventh American Edition. Prize Essay by S. Adolphus Knopf, M.D., New York, Professor of Phthisio-Therapy at the New York Post-Graduate Medical School and Hospital. (International Prize Awarded by Committee of the International Congress to Combat Tuberculosis as a Disease of the Masses, at Berlin, July 31, 1900.) Paper. Price, 25 cents. Cloth. Price, 50 cents. Pp. 122, with 64 illustrations. New York: The Survey, 105 E. Twenty-Second Street (1911).

Lehrbuch der Kinderheilkunde. Bearbeitet von Prof. Dr. Feer, Heidelberg; Prof. Dr. Finkelstein, Berlin; Priv.-Doz. Dr. Ibrahim, München; Dr. L. F. Meyer, Berlin; Prof. Dr. Moro, München; Prof. Dr. Von Pirquet, Breslau; Prof. Dr. Pfaundler, München; Prof. Dr. Thiemich, Magdeburg; Priv.-Doz. Dr. Tobler, Heidelberg. Herausgegeben von Prof. Dr. E. Feer, Direktor der Univ.-Kinderklinik in Heidelberg. Paper. Price, 11.50 marks. Pp. 734, with 162 illustrations. Vienna: Gustav Fischer, 1911.

Medical Jurisprudence, Forensic Medicine and Toxicology. By R. A. Witthaus, A.M., M.D., Professor of Chemistry, Toxicology and Medical Jurisprudence in Cornell University, and Tracy C. Becker, A.B., LL.B., Professor of Criminal Law and Medical Jurisprudence in the University of Buffalo. With the Collaboration of Various Authors. Second Edition. Volume 4. Cloth. Price, $7. Pp. 1261. New York: William Wood & Co., 1911.

Digest of Comments on the Pharmacopeia of the United States of America (Eighth Decennial Revision) and the National Formulary (Third Edition) for the Calendar Year Ending Dec. 31, 1908. By Murray Galt Motter and Martin I. Wilbert. Hyg. Lab. Bull. 75, U. S. P. H. and M.-H. S., Treasury Department, April, 1911. Paper. Pp. 564. Washington: Government Printing Office, 1911.

A Tuberculosis Sermon. By S. Adolphus Knopf, M.D., Professor of Phthisio-Therapy at the New York Post-Graduate Medical School and Hospital. With a Foreword by the Rev. John Haynes Holmes, Minister of the Church of the Messiah. September, 1910. Paper. Pp. 16. New York: The Church of the Messiah, Park Avenue and Thirty-Fourth Street.

Schutzpockenimpfung und Impfgesetz. Unter Benutzung amtlicher Quellen bearbeitet von Prof. Dr. Martin Kirchner, Geheimem Obermedizinalrat und vortragendem Rat im Ministerium des Innern. Paper. Price, 1 mark. Pp. 158, with 18 illustrations. Berlin: Richard Schoetz, 1911.

Transactions of the American Pediatric Society. Twenty-Second Session Held at the New Willard Hotel, Washington, D. C., May 3, 4 and 5, 1910. Edited by Linnaeus Edford La Fétra, M.D. Volume XXII. Cloth. Pp. 377, with illustrations. New York: E. B. Treat & Co., 1911.

Report from the Pathological Department Central Indiana Hospital for Insane. 1906-07, 1907-08. Cloth. Pp. 104. Vols. I and II. Same for 1908-1909. Vol. III. Pp. 224. George F. Edenharter, M.D., Superintendent, Indianapolis.

Official Proceedings of the First Annual Session of the Pan-Pacific Congress. Held at Honolulu, Hawaii, Feb. 20-28, 1911. H. P. Wood, Secretary, Honolulu, Hawaii. Paper. Pp. 47.

Health Hints and Health Talks. By E. R. Pritchard, Secretary of the Chicago Department of Health. Cloth. Price, 50 cents net. Pp. 153. Chicago: The Reilly & Britton Co.

Die Hodgkinsche Krankheit. Von Dr. Kurt Ziegler, Privatdozent in Breslau. Paper. Price, 9 marks. Pp. 204, with illustrations. Vienna: Gustav Fischer, 1911.

Thirty-First Annual Report of Creighton Memorial St. Joseph's Hospital, Omaha, Neb. For the Year Ending Dec. 31, 1910. Paper. Pp. 34.

Twenty-Second Annual Report of the State Board of Health of Florida, 1910. Joseph Y. Porter, Secretary, Jacksonville. Paper. Pp. 171

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SOME PROBLEMS IN GASTRO-INTESTINAL SURGERY *

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The title chosen for this paper may seem, perhaps, a trifle ambitious when one considers the short time at my disposal; therefore let me hasten to state that I shall attempt to consider but a few of the problems presented in the surgery of the gastro-intestinal tract, and even these I shall discuss only in a very desultory manner. It will be my aim to give expression to some observations of my own, and to personal impressions and ideas deduced therefrom, rather than to present an exhaustive study of the voluminous literature on the subject.

That the gastro-intestinal tract does present many most interesting and intricate problems will be readily admitted, I am sure, by every one who has had any considerable experience in this branch of surgery. Happily, owing to much careful observation and thoughtful consideration, combined with technical skill, scientific accuracy and painstaking effort on the part of many laborers in this field, problems which have for a long time baffled the best minds in the profession are one after another nearing solution. Indeed, it is not too much to say that already some of them have been solved, while undoubtedly the near future will witness the solution of others which now appear well-nigh hopeless.

It is certainly most encouraging if we for a moment look back on what has been accomplished during the surgical lifetime of many of those present. Let us take, for example, the operation of gastro-enterostomy. It has been a matter of only a very few years since after every gastro-enterostomy, the possibility of the vicious circle (now little more than an unpleasant memory), stared the surgeon in the face. The anxious questionings of former days as to the use of the long loop or the short loop, anterior fixation or posterior fixation, spur formation, closure of the pylorus, the particular method of suture or kind of suture material, are little understood by the younger generation of surgeons. To-day the operation of gastro-enterostomy is undertaken with as much assurance of success on the part of the surgeon, and almost as little fear on the part of the patient, as an interval operation for appendicitis.

Let us for a moment look the facts as regards this particular operation squarely in the face. Theoretically and physiologically it is all wrong, but practically, when performed under proper conditions and for definite indications, and in competent hands, it is followed, as a rule, by most satisfactory results. And why? Is the improvement in the symptoms the result of better drainage, as some would have us believe, or is it due to the neutralization of the over-acid contents of the stomach, a chemical process, pure and simple, as claimed by others? And why does an operation which is capable of producing such satisfactory results in one case fail utterly or even make matters worse in another presenting similar clinical phenomena? These are hard questions to answer.

The technic of this operation has been worked out so satisfactorily that its principles are no longer subjects for discussion. Unimportant details alone remain unsettled, such, for instance, as to whether in making the anastomosis the jejunum should point toward the right or toward the left, following respectively the method of Mayo or of Moynihan. I may add, by way of parenthesis, that in this particular controversy it appears to me that it matters little whether the jejunum points to the left or to the right, so long as the loop of jejunum is not rotated on its long axis at the point of union with the stomach wall, for if it is so rotated a valve formation with obstruction is very likely to be produced thereby.

In the hands of masters, such as the two whose names have just been mentioned, little concerning this operation is left to be desired; but, unfortunately, in the hands of ordinary surgeons, not especially skilled in abdominal surgery, the results at times are, to say the least, disappointing. Pain, troublesome indigestion, regurgitation of food, bilious vomiting, anorexia and loss of weight are some of the unpleasant symptoms occasionally observed. If these unsatisfactory results are carefully analyzed it will generally be found that in the beginning the indications for the operation had not been sufficiently definite; in other words, an unnecessary and ill-advised operation had been done, or that it had been hurriedly or unskilfully performed.

It can be said of this operation, I think, as truthfully as of almost any other, that its indications are known and its limitations at least fairly well determined. What is true of the operation of gastro-enterostomy is in varying degrees true of other operative procedures that have to do with the stomach and intestinal tract throughout.

In reviewing our experiences in this particular line of surgery, what has given rise to the gravest doubts? What to the greatest difficulties? Have they been problems of diagnosis or have they been technical problems of execution? While each undoubtedly possesses its own peculiar vexations, still I fancy that the most of you have had a like experience to my own, namely, that the difficulties of diagnosis have, on the whole, far outweighed those of execution. I am not as yet prepared to go quite so far as a well-known English surgeon who, in the course of conversation with me on this subject

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while I was on a visit to his clinic during the past summer, remarked: "It has come to this in abdominal surgery, that none but problems of diagnosis any longer excite interest. Since operative surgery has developed into so exact a science it has become little more than one of the mechanical arts, and hence too easy." I envy anyone this happy frame of mind, but the memories of certain situations fraught with danger and full of difficulty and anxious doubt, which, unexpectedly or not, developed after having opened an abdomen, are as yet too vivid to allow me to indulge myself in any such alluring fancies.

There is, however, an element of truth in what the eminent surgeon just quoted has said, and right here lurks a danger and a real one, too. Because, on the one hand, diagnosis is admittedly so difficult in many cases, and the more recent special tests demand of the examining physician special training in their making, and superior knowledge in their proper interpretation, while, on the other, operation has become so much more safe and exact, the temptation on the part of some to curtail a history or to slur over an examination and to rely on an exploratory incision because it is so easy, becomes increasingly more difficult to resist.

In order to avoid the performance of an unnecessary operation, which is always a reproach to surgery, or to prevent unpleasant results, at least four things should be borne in mind: (1) A correct diagnosis should be made; (2) every care and detail should be observed in order to make the operation technically perfect; (3) existing conditions should be accurately observed and properly interpreted; (4) the results of operative procedures should be carefully watched and recorded in sufficient numbers and covering long enough periods of time to enable one to judge of the end-results of given lines of treatment.

While hitherto it must be admitted, I think, by a candid observer, that in this particular field of surgery the physician, by his acts of omission in not promptly calling in the aid of the surgeon, has been the greater sinner, still this does not absolve the surgeon from the sins of commission just referred to. In arriving at a diagnosis too much care and thought cannot be exercised in the study of all the phenomena presented by the individual case, nor can too great scrutiny be imposed on a patient before submitting him to a surgical operation. If the surgeon oftener accompanied the physician through his wards or to his laboratory, or if the physician oftener followed his patient into the operating-room and saw what the surgeon sees, there would be far less point to these remarks. Fortunately this happy cooperation already exists in a number of clinics in this country, and the productive activity of these centers bears eloquent tribute to its effectiveness.

As stated above, while many of the problems in execution and some in diagnosis as well are nearing solution, a goodly number are still far removed from it. Let me report a case which well illustrates several points to which I wish to direct attention.

Case I.—*Patient.*—Miss S. S., aged 27, native of Pennsylvania, no occupation, was referred to me by Professor Barker, from the medical side of the Johns Hopkins Hospital, June 9, 1910.

Complaint.—General nervousness and stomach trouble.

History.—Patient comes from a long-lived, healthy family. As a child, she enjoyed good health. She had had the usual children's diseases, except scarlet fever and diphtheria. She had had a mild case of what was diagnosed as typhoid fever. Menstruation began at 17 and has always been painful; she has usually had to remain in bed for several days. During these periods she was very nervous with occasional hysterical manifestations, crying, laughing, etc. She has had more or less local treatment for this condition by specialists, from which she derived little benefit. She was operated on in a neighboring city five years ago for retroversion of the uterus, with little or no relief. A year later, another operation was performed, the exact nature of which she did not know, and as a result of which she thinks she grew worse instead of better. Three years ago, at a third operation, the appendix was removed, and at the same time a fixation of the uterus was performed. After this, she was improved for a while. One benefit she noted was that she did not have to remain in bed during the menstrual periods. All this time she has been very nervous and has had much trouble with digestion. Examination of the eyes, ears, nose and throat was negative. There were neither cough, dyspnea nor night sweats. There were no cardiac symptoms except nervous palpitation at times. There was no swelling of ankles. Stomach never pained, but food seemed to remain in it for a long time. She was never comfortable except when the stomach was empty. There were nausea and vomiting when food was forced, and she vomited after almost every meal. The vomitus was not sour, no blood. She was of constipated habit, but lately bowels had been more normal. She had no diarrhea, no blood, no urinary symptoms. She worried much about herself. For the past three years, her ill health had prevented her marriage, and she had become much discouraged. She complained especially of a heavy feeling in the stomach after eating, with nausea and vomiting, and often went a whole day without food in order that she might feel well enough to go to the theater at night. She had frequent and severe headaches.

Examination.—Blood showed: Reds, 5,000,000; white, 7,400; hemoglobin, 75 per cent.

Stomach Examination: This showed moderate increase of mucus, no free hydrochloric acid. Total acidity 7.5 per cent. Rennin and pepsin present in good amounts. No occult blood.

The patient had been kept on the medical side for some weeks under the care of Dr. Barker on rest and forced diet. She complained generally of gastric fulness, insomnia and depression. She appeared very excitable, buoyant at times, then much depressed, weeping, etc. She was very restless.

Further History.—During the time she was under observation on the medical side, the symptoms described continued with slight variation. Repeated examinations of stomach contents showed practically the same condition except that the free hydrochloric reappeared in small quantity. The vomitus had changed a little in character, becoming sour and irritating her throat. Pain also became something of a feature, associated with attacks of vomiting. The pain was described as epigastric in character, radiating to the left shoulder and between the scapulæ and back. Not having received any material benefit from the forced feeding and rest, she was transferred by Dr. Barker to the surgical side, and on June 10, 1910, I operated on her through a right rectus incision.

Operation.—On opening the abdomen, a marked general enteroptosis was revealed. The stomach was enlarged, its walls being pale, thin and flabby. The pylorus was wide open and twice its usual diameter, the first portion of the duodenum was dilated to a diameter of about 5 cm., its walls were thin and pale. The cecum was distended and displaced well down into the pelvis, the transverse colon apparently filling up the whole lower portion of the abdomen with several extra folds. The walls were thin and pale and the diameter about twice the usual size. The descending colon and sigmoid showed a similar condition. The whole lower portion of the abdomen seemed full of large intestine, behind which the coils of small intestine were collapsed and ribbon-like. The gall-bladder and ducts were normal. The uterus was adherent to the anterior abdominal wall. Tubes and ovaries were apparently normal. Solid viscera, liver, spleen, kidneys were normal but sharing in the general prolapse. It was thought best to excise the transverse colon and the two flexures, hepatic and splenic, as this portion of the colon seemed to be the seat of the principal abnormality. This was done between two clamps, the free ends were ligated and the stumps inverted as in an appendectomy. The bowel was divided with the actual cautery. A lateral anastomosis was made between the two segments of the colon. It was then decided, owing to the marked dilatation of the upper portion of the duodenum, to anastomose this portion of the intestine with the jejunum. A lateral duodenojejunostomy was, therefore, performed. This was rendered easy by the previous division of the mesentery of the transverse colon which had been made. In this way, it was hoped to obviate the possibility of an obstruction to the passage of food through the duodenum by the mesenteric vessels, the so-called gastromesenteric ileus. So far as I know, this is the first time that this operation has been combined with that of resection of the colon.

Post-Operative History.—The time of operation was a little over an hour. The patient stood it well, and returned to the ward in excellent condition. There was considerable pain for the first forty-eight hours, which was easily controlled by small doses of morphin. Nausea and vomiting were also present for the first few hours, the nausea continuing for three days. In other respects, she made an uneventful convalescence. A marked improvement in the mental condition was early noted. The patient left the hospital on July 2, 1910, very much improved in every way. I have heard from her recently, and this improvement was continued unabated up to the time of the last communication.

CASE 2.—*Patient.*—Mrs. E. O. P., aged 46.

Complaint.—(1) Pain in right side, running down leg into calf regarded as sciatic rheumatism; began twenty-five years ago. (2) Pain in right lower abdomen, localized; onset five years ago, was regarded as gall-bladder trouble. (3) Persistent constipation for past ten years; mucous colitis for several years.

History.—Exploratory laparotomy was done three years ago. Adhesions were found around gall-bladder, appendix, etc. The appendix was removed. She had right floating kidney. Exploratory laminectomy was done three months ago. No spinal cord tumor or other lesion was found to account for pain under the shoulder and spasms in right leg, etc. (sensory disturbances). Wassermann reaction was negative; stool examination was negative, abdomen was also negative on examination. X-ray plates showed, however, redundant colon.

Operation.—Dec. 22, 1910. Cecum and colon were excised as far as the splenic flexure. Lateral anastomosis was done, as in previous case. Recovery was uninterrupted. Patient was discharged Jan. 29, 1910, markedly improved.

CASE 3.—*Patient.*—Miss H., aged 33.

Complaint.—Constant dull headache, occipital in character. Pain in neck and down spine. Nausea and vomiting. Numbness of the left leg and hand.

Family History.—This was unimportant.

Personal History.—Patient was always a delicate child, and had suffered from stomach trouble for many years. Appetite had been rather poor. Digestion had never been good. Bowels have always been constipated. She had suffered a great deal from abdominal discomfort and six years ago the appendix was removed and the right kidney suspended.

Present Illness.—In September, 1908, she was admitted to the Johns Hopkins Hospital with general nervous breakdown, severe headache and chronic constipation. She remained there three months at the end of which time she was discharged somewhat improved. Three weeks after she left, however, the old symptoms reappeared. In March, 1909, she had another nervous breakdown with great weakness, headache and nausea and vomiting: she was in bed six weeks. She was then operated on for the relief of postoperative adhesions *supposed to* be due to the previous appendix operation. Four weeks after this operation, she had an attack which was supposed to be meningitis. In January, 1910, she had another spell of illness lasting six or seven weeks; she was in bed with weakness, headache, loss of appetite, insomnia and some nausea and vomiting. Since that time she has not been at all well. Her chief complaint has been obstinate constipation, abdominal distress and a general feeling of lassitude and disinclination to exertion of any sort. An exploratory incision was advised with the idea of resecting a portion of the colon, if conditions justified it.

Operation.—On Jan. 27, 1911, the abdomen was opened through a right rectus incision. The cecum was found to be very much distended, its walls thin and flabby. The ascending portion of the colon, the hepatic flexure and the transverse colon were all involved in this process. It was thought best to excise the distended and redundant portion of the colon which was done. The ileum was divided about two inches above the ileocecal valve and the transverse colon just in front of the sigmoid flexure. This portion of the colon was excised and a lateral anastomosis made between the ileum and sigmoid flexure.

The patient made an uninterrupted recovery and when last seen about three and one-half months after the operation, she expressed herself as perfectly well, not having had to use a cathartic since the operation, and having gained about 25 pounds.

These are the histories of typical gastro-intestinal neurasthenics, a type of case with which, I am sure, all physicians, to their sorrow, are familiar. Fortunately for the profession, and greatly to its credit, the diagnosis of neurasthenia is to-day becoming more and more infrequent and, when made, at once lays its author open to at least a suspicion of using this term as a cloak to hide ignorance or lack of skill.

It was perfectly evident that there was something radically wrong with the first patient, both physically and mentally, but without an incision we were unable to make an accurate diagnosis of her condition. The operation revealed a state of affairs which, from experience with other cases of this particular class, we had been led to expect with some degree of probability. Beyond this we were unable to go. Of course, it was possible, with a reasonable amount of certainty, to exclude many conditions, but to tell beforehand just what pathologic process would be found, or to explain satisfactorily the manner of its production, was beyond our diagnostic ability. But here is food for reflection: Two pathologic conditions revealed by the operation, to which I wish to call especial attention, were: (1) the great dilatation of the upper portion of the duodenum, with the wide open pylorus, and (2) the great redundancy of the colon, particularly of the transverse portion, together with its malposition. This condition of the duodenum first attracted my attention about fifteen years ago, and so far as I know was first described by me, although it had been observed over fifty years ago by Peebles and later by Robinson. I was at that time unable to explain it. After a good deal of thought and many subsequent observations I am still unable to explain it. I do not believe that the explanation of those who would ascribe it to a chronic gastromesenteric ileus will account for all the cases. Possibly some may be due to this cause. Still more unsatisfactory is Ochsner's idea of the circular muscle fibers in the duodenum, with their sphincteric action.

Associated with this condition are almost invariably to be found changes in the external appearance and feel of the pancreas, sometimes changes similar to those which have been characterized by Mayo Robson as "chronic pancreatitis"; at others an apparent atrophy of the gland is observed. I cannot but feel that in some way or other changes in the structure or function of the pancreas are more or less intimately concerned in the production of this condition of the duodenum, and are, perhaps, the chief factors. In just what way I am unable to say.

In this connection the interesting investigations of Weinland are worthy of note. Always one finds that the walls of the duodenum are thinned, and that the mucous membrane is atrophied, and that the normal folds have become obliterated. Codman, Stavely and others would have us believe that many of these cases are due to the taut mesenteric vessels compressing the duodenum against the bodies of the vertebræ—a chronic gastromesenteric ileus. It is conceivable that this cause may be active in a certain percentage of cases, but after careful and systematic examination of a large number of patients on the operating table I have been unable to demonstrate it to my own satisfaction, or that of spectators or assistants, more than once or twice. Then, too, if this compression were the real cause of the trouble, it would furnish an almost ideal indication for a gastro-enterostomy, and complete relief ought to follow this operation. On the contrary, however, this is not the case. The usual operative methods have, in my experience, failed utterly to relieve the trouble, and until quite recently, when this condition has been found at operation, I have at once admitted my inability to cope with it, and have closed the abdomen without further effort. It is to be hoped that the operation of duodenojejunostomy, either alone or combined with resection of the colon, as by the method just described, may be developed sufficiently to furnish the desired relief.

It was early noted that associated with this condition one very frequently, although not invariably, would find marked changes in the size, position and length of the large intestine. The anatomic and physiologic studies of Glenard, Treves, Huntington, Mall, Metchnikoff, Dwight, Clark, Lane, Cannon and a host of others have from time to time directed attention to the important part played in the physical economy by the large intestine, until now members of the profession are becoming aroused to the possibilities for evil contained in this organ, and are beginning to study seriously the best measures for relief therefrom. Medical literature is becoming steadily enriched by reports of greater or less merit bearing on this subject. It is quite likely that in the near future definite lines of action will be laid down in this branch of surgery, just as they have been in the case of the stomach. The work of such enthusiasts as Metchnikoff and Lane is bound to bear fruit through the more sober judgment and conservative action of less radical members of the profesion. Personally I cannot explain to my own satisfaction, on anatomic grounds alone, the phenomena which result from this redundant condition of the colon. Unquestionably, embryologic and developmental defects do play a part, probably an important one, in the production of this condition. Nor does it seem possible, as Lane and others would have us believe, that acquired defects, such as adhesions to neighboring structures, peritoneal hypertrophies and bands resulting from abnormal strain, and giving rise to kinks and stenoses of the ileum, colon or appendix, as the case may be, can account for all the conditions found. These in all probability play their part, but only a part. The "cesspool" idea of Metchnikoff cannot be disregarded. Indeed, I am inclined to think that, after all, the chief cause of the phenomena exhibited by these cases is going to find its ultimate explanation in the absorption from the colon of the chemical products of bacterial activity. The problem, to my mind, is one of chemistry rather than mechanics. Faulty mechanical conditions, whether congenital or acquired, are undoubtedly a contributing cause through their increasing bacterial activity and virulence by bringing about more or less complete stasis of the intestinal contents.

But if this were the sole factor, how can we explain the absence of symptoms in that large class of cases in which redundance and ptosis of the colon are present, to [illegible] be in the enjoy- a marked degree, while t[illegible] ment of the best of health? I am the more convinced of the correctness of this position from an experience with the operations of appendicostomy and cecostomy in a series of fifteen cases in which one or other of these operations had been performed. These operations were done for a variety of conditions, chronic infections of the colon of one kind or another (not including amebic dysentery), and cases of simple ptosis of a redundant colon, associated with mucous colitis. All the patients presented in a more or less marked degree evidences of intoxication, together with pronounced neurotic tendencies. In every case but one of the series marked improvement followed irrigation with first normal salt solution, and then solutions of permanganate of potash, beginning with a strength of 1 to 10,000 and gradually increasing up to 1 to 1,000. The more marked the evidence of the absorption of the products of bacterial infection, the more pronounced was the beneficial effect of the irrigation. Where evidences of bacterial activity were but slight, relief was correspondingly slight. In two cases of this series in which the infection was of an intense character, as evidenced by frequent discharges of foul-smelling feces, mixed with large quantities of mucopus, frequently blood-streaked, the improvement was phenomenal.

The difficulty in making a positive diagnosis in any given case of stomach trouble is that one has to consider the possibility of the existence of one or possibly more of a long list of abdominal affections, as well as not a few extra-abdominal diseases. In an earlier paper I called attention to this fact at some length.

Every case of stomach trouble becomes at once a problem calling for most careful investigation. The difficulty of solution of this problem will depend on whether the cause lies primarily in the stomach itself or remote from it. Every one knows with what great frequency the stomach is the first to give warning of the existence of disturbances arising, not only within itself, but even in remote portions of the body. Think, for example, of the exanthemata, gall-stones, cirrhosis of the liver, brain tumor, tuberculosis, angina pectoris, eyestrain, appendicitis, diseases of the uterus and adnexa, etc. I am sure every one can recall instances in which attention has been diverted and he has been led away, for a time at least, from the true site of the disease, by more or less marked gastric disturbances. It seems trite to state that one cannot be too careful in forming good habits of making a thorough routine examination in every case, however simple it may appear at first. Then, too, one is so often misled by misinterpretation of phenomena common to certain well-recognized pathologic lesions. Take, for instance, the question of the appearance of blood, whether occult or visible, in the vomitus and in the stools. Its presence is generally interpreted to mean an injury to or loss of substance of the mucous membrane somewhere along the gastro-intestinal canal. Usually, of course, if cirrhosis of the liver and the grave primary anemias can be excluded, it means gastric or duodenal ulcer, or carcinoma. Recently I have operated on three such patients, one physician and two business men, in whom repeated and severe hemorrhages from the stomach had been the chief feature in a rather long history of gastro-intestinal disturbances. All three cases had been diagnosed by competent physicians as probable gastric ulcer. In no case, after careful search of the stomach and intestinal tract, could the slightest evidence of a break in the mucous membrane be demonstrated. In three other cases exhibiting pronounced gastro-intestinal symptoms, persistence of occult blood in the stools, cancer having been practically excluded, led to the probable diagnosis of duodenal ulcer. Operation showed no gastric or duodenal ulcer and no other explanation of the blood in the stools, save gall-stones in the gallbladder and cystic ducts, without any clinical manifestations of their presence. Instances of this sort could be multiplied in other directions, but their enumeration would lead us too far afield.

The point I wish to make is simply this: gastrointestinal symptoms may be extremely difficult to interpret promptly, at times may be most misleading, and in no department of medicine or surgery with which I am familiar is the truth of the Hippocratic aphorism as to the difficulty of judgment or the fallaciousness of experience more strikingly demonstrated.

In the matter of interpretation of the findings at operation great latitude will be observed. In the present imperfect state of our knowledge speculation must, of necessity, play a great part in accounting for the various phenomena that are presented on the operating table. What may be considered by one person to be cause will just as surely be believed by another, just as competent, to be effect. Each will have his arguments and explanations, satisfactory to himself and possibly to some others, but not universally acceptable. Take the matter of the sagging of the colon—some explain it on anatomic grounds, a congenital defect; others think it is acquired, and when so acquired no two observers will explain in the same manner the process by which it has been acquired. Take also the matter of adhesions. Their frequency is admitted by every one, but the method of their formation is debatable ground. Again, take the matter of the relationship which a chronic adherent appendix bears to the various gastrointestinal disturbances which are grouped under the general heading of neuroses. Everyone, I am sure, will admit that there is a definite relationship between these conditions, but as to just how far the one is really dependent on the other a great diversity of opinion will be found to exist.

The following cases will illustrate my point:

CASE 4.—*Patient*.—E. T., aged 32, entered Johns Hopkins Hospital April. 1910.

Complaint.—Flatulency and indigestion.

History.—Family and past history unimportant, except that he has had indigestion for years, evidenced by flatulence and abdominal discomfort. There had been jaundice, no blood in stools, no vomiting until onset of present illness, which began six years ago, with a sudden faint feeling following slight "dyspepsia." He fainted twice, and soon afterward vomited a large amount of bright red blood. He was treated in the hospital for several weeks. He had no more bleeding, but hemoglobin was low and he felt weak. He has vomited blood once, about half an ounce; he has had symptoms of hemorrhage, however, on several occasions, *i. e.*, faintness, greatly increased flatulence. and tarry stools. Blood count has been as low as 2,500,000 and hemoglobin 40 per cent. He complained of no abdominal pain except that referable to flatulence, usually under right or left costal margin, and disappearing when gas was expelled. He improved up to December. 1909. Since then has had increasing anemia, some tarry stools and some "faint spells."

Examination.—Patient was anemic looking, but fairly well-nourished. Lungs were clear; heart was clear, except for soft systolic blow at apex. Abdomen showed marked general distention: no tenderness anywhere, no visible peristalsis. Liver flatness was entirely obliterated. There was constant eructation of gas and occasional audible gurgling in intestines.

Blood: Reds. 3,400,000; hemoglobin. 45 per cent.

Operation.—April 8, 1910. This revealed (1) Marked distention of small bowel throughout its entire extent; the large intestine shared in the general distention, but not to the same extent as the small bowel; it appeared relatively normal. (2) No sign of ulcer or pyloric obstruction. (3) No cause for distention. (4) Appendix definitely thickened and inflamed. It was removed. (5) No evidence of cirrhosis of liver. Spleen normal. Pancreas normal. (6) No obstruction by the mesenteric vessels (gastromesenteric ileus). (7) Walls of stomach and small intestine pale, thin and flabby. Appendectomy was the only surgical procedure that appeared to me to be justified or indicated.

Result.—The intestinal coils were so distended that the abdominal wound was closed with great difficulty. Healing was delayed by the subsequent breaking open of the lower third of the incision with the escape of several coils of small bowel. These were replaced and the wound healed slowly by granulation. No weak spot has so far developed.

I have received a letter from him recently in which he states that he has gained in weight, and in every way has greatly improved since operation, although not yet quite free from flatulence.

CASE 5.—*Patient*.—P. M., aged 47, admitted to Union Protestant Infirmary November, 1910, complained of stomach trouble.

History.—Family history and past history were negative, except that when a boy of 15 he had hip disease. He was under treatment for a long time, and the disease has left him an ankylosed joint with the thigh flexed at an angle of 45 degrees, producing an associated lordosis of the spine of well-pronounced type. He has had no trouble whatever from his hip since it has been healed, and no other manifestations of tuberculosis, past or present. Appetite and digestion were good; color was sallow. He had lost about twenty pounds during his illness, which dated from about two years previous. At this time, he had a well-pronounced attack of what was diagnosed as indigestion and which yielded to treatment and disappeared, after about three months. About one year ago, he had a return of his former digestive disturbances. He first noted that about three hours after eating he became uncomfortable, felt bloated and there was unusual and intense thirst. After drinking water, he would either vomit it almost immediately, or become more uncomfortable. In September, 1910. he vomited blood and thinks he had tarry stools at this time. He has had no pain of consequence, but has felt very uncomfortable, especially when hungry. This discomfort was relieved almost invariably by eating. The chief feature for the last few weeks was vomiting, which took place almost immediately after every meal, or even after taking a drink of water. The vomitus usually contained the food previously eaten. There seemed to be no special retention. The vomiting was painless. Bowels have been constipated. Relief from constipation seemed to lessen his symptoms, to a certain extent. Examination revealed nothing except a moderately distended stomach, in which splashing sounds were readily obtained. There seemed to be a moderate degree of general enteroptosis. The examination of the stomach contents showed rather low acidity, otherwise negative. Urine was normal. A definite diagnosis did not seem to be warranted from the history and findings but the discomfort had been so great, that an exploratory incision appeared to be indicated. The most probable condition seemed to be gall-stones or duodenal ulcer.

Operation.—Operation showed a marked degree of general enteroptosis. The stomach was considerably dilated, the walls being thin and flabby. The pylorus readily admitted the end of my thumb. The duodenum, except for a few slight adhesions. appeared normal, being only slightly distended. There was no evidence of thickening, induration or ulcer formation, in any part of the stomach or duodenum. The gall-bladder and ducts were normal. with no evidence of gall-stones. Pancreas was normal. Owing to the prominence of the bodies of the vertebræ due to the lordosis referred to above, the mesenteric vessels seemed to be rather tightly stretched across the duodenum. On hooking my finger under them and attempting to lift them up, it took considerable force to lift the coils of small intestines out of the pelvis, which they occupied. The upper portion of the duodenum, however, did not appear collapsed. but contained a moderate amount of gas, as did the duodenum above the obstruction. On relieving the pressure from the vessels by lifting, an appreciable amount of gas was observed to pass from the duodenum into the jejunum. The appendix was found adherent, kinked on itself and its walls chronically thickened; it was removed. The large intestine appeared abnormal, elongated and thrown into folds. The sigmoid was somewhat distended but contained no fecal matter. The transverse colon had sagged well down into the pelvis. The descending colon and sigmoid appeared fairly normal, but redundant. The walls of the colon througnout were thin and pale. The solid viscera appeared normal, but were involved in the general ptosis.

Remarks.—What gave rise to the symptoms the man complained of, I was unable to determine. There was no obstruction to the pylorus; there was a suggestion of obstruction of the duodenum by the iliac vessels, no evidence of induration of the gastric or duodenal walls; certainly no new growth. The colon was abnormally long and thrown into folds, but I did not feel justified in employing any radical measures therefor. After removing the appendix, the abdomen was closed. The operation has been done so recently that it is too early to tell anything as to the ultimate result, but the man has not vomited since, after having vomited regularly after each meal for the past eighteen months, and is gaining steadily in weight. He has resumed business and considers himself well.

Two competent observers, Professors von Eiselsberg, of Vienna, and Halsted, who happened to be present at the operation on the first of these two patients, expressed the opinion that the appendix was sufficient to account for the conditions found. Personally, in spite of the relief which has followed the removal of the appendix, it is hard to believe that that alone was responsible for all the pathologic processes present.

The third case, as well as the one first reported, would be considered by some, I am sure, as instances of chronic gastro-mesenteric ileus. That there is such a thing as an acute process associated with an immensely dilated stomach must certainly be admitted; many cases have been reported by different observers. I have observed and reported a number of such cases, but it is difficult even here to distinguish cause from effect. Which is the antecedent condition, the dilated stomach or the taut vessels? In other words, which is the cause and which the effect? In the production of similar conditions is the same cause always active? It is impossible at present to answer these questions satisfactorily.

What is the cause of the dilated duodenum with the wide-open pylorus to which I have referred? Why are its walls always so thin, pale and flabby? A number of possible explanations suggest themselves at once, but when one comes to demonstrate the constant presence and activity of any one of these causes at once he is confronted with a difficult, indeed at the present time, an almost impossible problem.

To me this whole group of gastric neuroses, so called, presents a most interesting and fascinating field for study, but one of such complexity that it is difficult to unravel its mysteries. One great difficulty which has retarded somewhat, I think, the progress toward solution of some of the problems has been too great a tendency on the part of certain writers to dogmatize on too little evidence. Dogma has little field in medicine, especially in this particular department. What is needed rather is a long series of carefully reported cases in which the clinical histories have been accurately recorded, the findings on the operating table confined to facts observed, rather than to fanciful theories and explanations to bolster up preconceived ideas as to pathology. Wherever this has been done real progress has been made, and real addition to our knowledge of the subject achieved.

The trouble with our operations for neurasthenia is a fundamental one. We generalize too much. Instead of careful painstaking study of the etiology of each individual case, we are prone to group them, often erroneously, into certain general classes and subject the individuals of each class to the same treatment. Not infrequently, we do grave injustice to certain patients by, on the one hand, subjecting to the dangers and distress of a surgical operation individuals who are not proper subjects for it and who are frequently made worse thereby, while, on the other hand, we withhold from others the benefits which would accrue from a properly carried out surgical procedure. In this connection, as pointed out by Reynolds, so far as surgery is concerned: "The attainment of satisfactory end effects on the neurasthenic state itself depends first and primarily on the selection for operation of cases in which the neurasthenia is the result of local suffering, due to local lesions, and the exclusion from operation of all other cases; secondly, on the termination of local suffering by successful end results in the operation itself." Otherwise, the neurasthenia is invariably made worse.

Problems of embryology, anatomy, physiology, chemistry, pathology, medicine and surgery are apparently so inextricably interwoven in the etiology of these gastric and intestinal neurasthenic states, that the only hope for a satisfactory solution of the questions involved lies along broad lines of investigation. My own impression is that the particular dilatation of the duodenum and colon to which attention has been called, together with the thinning of their walls will be found to be largely a problem of physiologic chemistry.

I am only too well aware that in this rather fragmentary and disconnected paper, I have contributed little that is new to the subject, but if by what I have stated I may have succeeded in stimulating a discussion of the problems involved, in a more scientific frame of mind than has at times prevailed, I will feel that my object has been accomplished.

SUMMARY

1. Problems of diagnosis present greater difficulties and are further from solution than those of treatment.
2. Certain operative procedures, gastro-enterostomy, e. g., have reached such a state of perfection that the ease of performance renders them a possible menace and calls for greater care in the proper selection of cases.
3. The tendency to dogmatize on too little evidence in matters pertaining to the causation and treatment of the so-called functional intestinal neuroses should be discouraged and a more scientific observation, interpretation, collection and record of established facts substituted therefor.
4. As a result of the knowledge gained by such comprehensive and exhaustive study of the intricate problems involved, it is not unreasonable to hope that ultimately in carefully selected cases surgery may offer relief to this unfortunate group of gastro-intestinal neurasthenics.

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Treatment of Severe Anemia with Injections of Blood.—G. Mann reports from Triest three additional cases in which apparently moribund patients were saved by the stimulus from injection of 20 or 25 c.c. of whole blood supplementary to the ordinary measures.—*Wiener med. Wochenschrift*, 1911, lxi, 579.

THE DIAGNOSIS OF EARLY PULMONARY TUBERCULOSIS*

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It has been variously estimated from autopsy findings that from 30 to 100 per cent. of all adult persons have, or have had, tuberculosis. The cutaneous and subcutaneous tuberculin tests on the living confirm the deductions from autopsy statistics. From 10 to 14 per cent. of the mortality from all causes is due to tuberculosis, a higher percentage than is attributable to any other disease. If we accept the estimate of infection given by Harbitz,[1] 50 to 70 per cent. for all ages, we may say that in about one out of every five persons infected the disease, under present conditions, will progress to a fatal termination. It is practically certain, then, that at least one out of every ten of our patients will die from tuberculosis, if we do not discover the disease early and advise proper measures to combat it.

That the failure to diagnose pulmonary tuberculosis in the early stages is a widely spread evil is abundantly proved by the army, navy, and life insurance statistics, which show that a large percentage of deaths from tuberculosis occurs during the first two years after enlistment or after policies have been issued. Greene[2] says: "It is evident that life-insurance companies are *constantly* accepting men in the active stage of tuberculosis." In the annual reports of the Surgeons-General, U. S. Army and Navy for 1910, it is shown that 10 and 14 per cent., respectively, of deaths in the army and navy for the year 1909 were due to tuberculosis, and that the disease is particularly associated with the first half of the first enlistment. Yet the services and the insurance companies represent picked men selected by a picked group of physicians. Furthermore, everyone who has paid special attention to the diagnosis of tuberculosis is constantly seeing advanced, but previously undiagnosed, cases that have been under the care of one or more physicians. Girdwood[3] states that in Maryland, where registration of tuberculous cases has been enacted into law, only 595 out of 2,200 physicians in the state reported cases to the State Board of Health. He says, "Assuming that there are 1,600 physicians in active practice in this state (Maryland), who see cases of tuberculosis, but 595, or about 37.5 per cent., are fulfilling the requirements of the law." Of all the cases reported "the Phipps Dispensary alone reported 33 *per cent.*" Girdwood thinks that he is conservative in estimating that 90 per cent. of all the cases reported were in the second or third stage of the disease.

The conclusion is unavoidable that the mass of the medical profession is failing to utilize opportunities for early diagnosis, and avoiding the disagreeable and, at present, thankless task of telling men that they have tuberculosis. It is certain that the highest degree of "education of the public" against "the great white plague" will avail but little unless the medical profession educates itself in the diagnosis of early tuberculosis, and unless the medical schools send out their graduates more thoroughly drilled in the recognition of the early manifestations of the disease, and imbued with the idea of the importance of such recognition, and of the responsibility that rests on each member of the profession.

The responsibility does rest on us, and we must accept it. The real issue cannot be obscured by philanthropic displays, by contributions of large sums of money, by popular articles, exhibits, Red Cross seals, etc. These measures are useful in a limited way, but the philanthropy most needed is the self-education of physicians, and the public must be taught to accept without resentment an early diagnosis of tuberculosis, and to hearken to the warning while yet there is time.

It is probable that almost all patients with advanced tuberculosis have consulted physicians early in the disease, and that the majority of the infections could have been arrested if the diagnosis had been made at the proper time; that the majority of the lesions would have remained closed lesions with proper treatment; and that but a limited number of the patients would have become foci of infection through the expectoration of tubercle bacilli.

Such early recognition is nearly always possible, so frequently possible, indeed, that a physician should feel keen remorse when he has seen a patient and has failed to take advantage of the opportunity to diagnose the disease before tubercle bacilli appeared in the sputum. Lawrason Brown[4] states that a patient's chances of recovery are at least twice as good, and on the whole seem many times better, when the diagnosis is made before the appearance of tubercle bacilli. That the diagnosis can be, and is, so made by men who have trained themselves in the subject, is well known. For instance Nagel[5] was able to find bacilli in the sputum of only 1.4 per cent. of incipient cases.

EARLY SYMPTOMS

It is not within the scope of this paper to discuss symptoms that obviously point to the possibility of tuberculosis, such as persistent cough, repeated colds, hemoptysis, pleurisy, chronic laryngitis, etc. But there is a large group of early sufferers, the members of which appear to be mild neurasthenics, and this group is deserving of especial mention. There is no disease in which "neurasthenia" is as common as in tuberculosis. The tuberculous poison has a powerful action on the nervous system, and every variety of functional nervous symptom may result from it.

In the beginning the patients of this group may complain only of feeling "run down;" fatiguability, a cardinal symptom of neurasthenia, is one of the earliest symptoms of tuberculosis; insomnia, likewise, is common to both; also "nervousness," irritability, depression and gastric disturbances. If there is no cough (and even a cough is sometimes attributed to nervousness), these patients usually are not given a careful physical examination, nor is a careful record of temperature taken. Slight abnormal physical signs can be found frequently in them, however, and a daily record of temperature will often show a regular rise to 98.8 to 99.5 F. I cannot consent to the interpretation that this may be a normal afternoon temperature. With the patient relatively at rest, such a daily rise of temperature constitutes fever and furnishes strong evidence, taken with other phenomena, of tuberculosis. "Neurasthenics," therefore, should never be classed as such without careful physical examination and a daily temperature record, and, if these results are at all suspicious, a tuberculin test.

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*Read at the meeting of the Medical Society of the Isthmian Canal Zone, Jan. 18, 1911.

[1] Cited by Baldwin: Osler's Modern Medicine, iii, 198.

[2] Greene, C. L.: Osler's Modern Medicine, vi, 761.

[3] Girdwood, John: The Responsibility of the Physician in the Campaign Against Tuberculosis, THE JOURNAL A. M. A., Dec. 4, 1909, p. 1881.

[4] Brown, L.: Osler's Modern Medicine, iii, 338.

[5] Cited by Brown: Osler's Modern Medicine iii, 334.

THE NORMAL CHEST

The great prerequisite in the examination for early signs of pulmonary tuberculosis is a thorough knowledge of the normal chest, with its variations in different persons of different sexes, ages, size, weight, etc., and with its topographic differences between the two sides and between different areas of the same side in the same individual. Though this statement may seem to be a truism, it is not an idle repetition, for the possession of such a knowledge is not easily acquired, and the close observation and training necessary to gain it are sadly neglected. There are a few less well-known topographic differences normally in the same chest that it may be worth while to mention.

Cabot[6] has recently called attention to the frequent occurrence of louder, harsher breath sounds at the left base posteriorly than at the right base. He found this difference in 67 per cent. of patients examined. This difference must, therefore, be taken into account in comparing the two sides.

Another phenomenon worth noting is that here and there over the lung one not infrequently strikes a small area where the breath sounds are harsh or even bronchovesicular, with intensified voice and whispered sounds, but without râles or dulness. The most frequent sites of these areas are near the angle of the scapula, in the upper axillary space, and near the mid-clavicular line below the nipple. I have been in the habit of looking on the phenomena as due to relatively large bronchi approaching the surface of the lung, together with the fact that in the areas noted the muscle-covering is thinnest.

Under percussion it may be mentioned that the note becomes shortened and less resonant over those portions of the chest where the ribs make their greatest curves. he thoracic wall at these places is not so easily set into ibration. In percussing the outlines of the apices, I have found that the breadth of resonance on the right is often slightly less than on the left.

LOCATION OF LESIONS

The location of progressive tuberculous lesions is generally in or near an apex. According to Tendeloo,[7] the most frequent site is in the "paravertebral cranial" portion of the lung, that is, in the upper portion of the upper lobe posteriorly, corresponding to the upper part of the interscapular region; the apex itself is next in frequency of involvement, then the anterior upper portion of the lobe.

In 287 bodies that I studied with reference to tuberculosis, I found the active progressive lesions usually in or near the apex, but I found many old pleuropulmonary tubercles in the lower lobe. These foci were characterized by a decided tendency to become encapsulated or calcified. I feel, however, that they may account for many instances of so-called atelectatic râles near the bases associated with "soreness in the side," "intercostal neuralgia," etc. But owing to the majority of progressive lesions being near the top of the lungs, it naturally follows that the earliest signs are most frequently found in the upper thorax. The lower lesions should not be ignored, however, for secondary infection of the peribronchial glands is likely to occur, and afterward the apices may become involved.

EARLY PHYSICAL SIGNS

One may see at an early stage a slight drooping of one shoulder, with slight wasting of the muscles of the shoulder-girdle, and there may be a little lagging behind during inspiration of the chest wall on the affected side, or a slight sinking in of one of the clavicular fossæ. Inspection in the early stages rarely reveals more, and the signs are not clearly distinguishable from frequent asymmetries due to other causes. The wasting of the shoulder-girdle muscles is more significant if it is on the right side in right-handed persons, and on the left in the left-handed.

PALPATION

Changes in tactile fremitus are not produced early, but palpation aids in determining slight differences in expansion and in wasting of muscles. Pressure on the muscles, especially the trapezius, and on the ligaments about the shoulder-joints, will often demonstrate tenderness, which may be associated with an aching sensation in the joint. There is not infrequently a hyperesthesia of the skin over affected areas and gentle pinching will elicit it. Pottenger's sign,[8] which consists in muscle spasm (?), detected by light palpation over areas of involvement, is worthy of study. In apical involvement the sternocleidomastoid and scaleni muscles on the affected side stand out distinctly and feel tense on light palpation.

PERCUSSION

One of the earliest changes in tuberculosis is a tendency to shrinkage of the lung, evidenced by a narrowing of the apical outlines, sometimes called Kroenig's sign. Minor,[9] who has well presented the sign, says of it:

> Taught and practiced for years by careful clinicians in Germany, dwelt on by von Ziemssen in his small but classical article "On the Diagnosis of Tuberculosis," and by Kroenig with even more emphasis, in his well-known article, it is yet undeniable that few American practitioners have given it any attention, or used it systematically in their routine work.

It consists in determining the inner and outer borders of apical resonance both in front and behind, and measuring the width of the isthmus found by the junction of the lines above at the border of the trapezius muscles. Very gentle percussion must be used, and the patient's head must be kept in the mid-line in the anteroposterior position. Definite narrowing of the isthmus, either by a moving outward of the inner border or inward of the outer border, or both, means retraction of the lung, which is very suggestive of tuberculosis. It occurs before dulness can be elicited and is a very valuable sign.

Another procedure that I have found useful is one shown me by Dr. Lawrason Brown of Saranac Lake. Standing behind the patient, one grasps firmly the apex of the lung, as it were, with his whole hand, his finger-tips being in the supraclavicular fossa just above the clavicle. He then percusses, with gentle taps and with a downward and backward stroke, the fingers in the fossa. First one apex and then the other is percussed. Dulness can sometimes be brought out in this way when none can be demonstrated otherwise. Incidentally, the degree of wasting of the trapezius muscle is very noticeable when the muscle is grasped in this way.

In the examination for tuberculosis one should never neglect to percuss out the lower borders of the lungs during forced expiration and then during forced inspiration, thus determining the excursion of the diaphragm on each side. The excursion may be limited on the affected side early in tuberculosis. Small pleural effusions will frequently be found if this is practiced as a routine procedure.

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[6] Cabot, R. C., Am. Jour. Med. Sc., 1909, cxxxviii, 813.

[7] Tendeloo: Sixth Internat. Cong. Tuberc., 1908, vol. 1 part 1, p. 86

[8] Pottenger: Med. Rec., Oct. 23, 1909, p. 685.

[9] Minor, C. L.: Am. Jour. Med. Sc., October, 1906, cxxxii, 522.

Goldscheider[10] has recently written a monograph on the subject of "Early Physical Diagnosis of Pulmonary Tuberculosis," in which he strongly advocates extremely delicate percussion. He compared the findings by his method with the findings by ordinary percussion and skiascopy. The results by his method and by skiascopy were practically identical, while ordinary percussion proved to be far inferior. The delicate percussion will reveal minimal dulness, the signs of which may vanish if the force of the stroke is increased.

Waller,[11] of Sweden, has proposed a plan for the classification of different degrees of dulness in order that accurate comparisons may be made by different observers, and in order to judge with greater accuracy the changes in dulness during healing or progress of lesions. He insists that the "symmetrical-comparative" procedure in percussing has been overemphasized and should be relegated to a subordinate place. He thinks that the percussion note should be judged by comparing it with a point of known normal vesicular resonance, such as is usually obtained in the lateral part of the infraclavicular fossa, rather than by comparison with a symmetrical point on the opposite side, which may be itself the seat of disease. Waller considers that there are five degrees of dulness, D^1, D^2, D^3, D^4 and D^5, followed by absolute dulness or flatness. D^1 and D^2 represent slight dulness, D^3 moderate dulness, D^4 and D^5 high degrees of dulness. Waller calls the normal percussion note the non-tympanitic sound; and dulness is the shortening and commingling of this sound with the tympanitic sound characteristic of relaxed lung tissue. His method is distinguished from the old method mainly by the fact that the degree of dulness is not judged by the percussion sound as a whole, but only by a certain part of it, the non-tympanitic sound. He summarizes briefly his method as follows:

1. *Weak Percussion.*—A. The non-tympanitic sound is heard throughout the respiration, though somewhat, or distinctly, short: first degree of dulness; sign, D^1. B. The non-tympanitic sound is heard only during a part of the respiration, when the breathing is ordinary or forced: second degree of dulness; sign, D^2. C. The non-tympanitic sound is quite inaudible. The strength of percussion is increased:

2. *Medium Percussion.* — A. The non-tympanitic sound is heard: third degree of dulness; sign, D^3. B. The non-tympanitic sound is not heard. The strength of percussion is increased:

3. *Strong Percussion.*—A. The non-tympanitic sound is heard: fourth degree of dulness; sign, D^4. B. The non-tympanitic sound is not heard: fifth degree of dulness; sign, D^5.

Waller's method of percussion is attractive and should be extremely useful in classification and early diagnosis if it can be proved practicable. But one must require careful practice and a nice ear for analysis of sounds to become proficient in it. I have not yet succeeded in training myself in its use. If practicable, it should mark a distinct advance in the art of percussion.

AUSCULTATION

A most important prerequisite in auscultation is to get the patient to breathe properly. Many persons seem to have no voluntary control of the muscles of respiration, and it often requires patience and repeated examinations in order to develop in the patient satisfactory powers of breathing. Especially is this true in auscultating the lower portions of the lungs when abdominal breathing is desirable. A "deep breath" usually means to a patient expansion of the chest and a retraction of the abdomen, in which case there is but slight contraction of the diaphragm. A distention of the abdomen with inspiration of course means contraction of the diaphragm, and when it is difficult for patients to breathe deeply in this way, I have sometimes found it useful to place a hand on the abdomen to give the respiratory rhythm which can sometimes be kept up. With a little practice, most patients can soon control the muscles.

Regarding the well-known changes in the respiratory murmurs in early tuberculosis, little need be said. The important desideratum is that care and patience shall be exercised in bringing out the changes and that the examiner shall know where and how to look for them. They consist of slight loudness or harshness of the respiratory murmurs, slight prolongation and accentuation of the expiratory murmur, a wavy inspiratory murmur, and fine râles heard usually at the end of forced inspiration, but sometimes at the beginning of expiration. One or more of these changes may be present. Râles not elicited otherwise may sometimes be brought out by forced expiration, a quick cough, with as little noise as possible, and then a forced inspiration. The râles may be heard with the cough, at the beginning of inspiration, or at the end. This is an important procedure and no examination should be pronounced negative without it.

It is generally stated that fine râles may be heard frequently over the bases at the end of deep inspiration in normal lungs, the so-called atelectatic râles which clear up after a few deep breaths. No special importance should be attached to these râles, but if the area over which they can be heard is large and extends upward some distance, if the râles persist after a few deep inspirations, or if there is slight soreness, tenderness on pressure, or a little hyperesthesia of the skin over the areas, I believe that considerable significance should be attached to them. I have said that in autopsies I frequently found pleuropulmonary tubercles in the lower lobes, usually in the lateral and anterior portions, and I believe that these lesions are responsible for many instances of so-called atelectatic râles.

SPUTUM EXAMINATIONS

Though the presence of tubercle bacilli in the sputum usually marks a late stage, still at times a small lesion that produces no physical signs may soften and rupture into a small bronchus, and bacilli appear in the sputum before signs or perhaps even symptoms occur. In every suspicious case, therefore, and in every patient with sputum a careful examination for tubercle bacilli should be made. They have been found in many instances after numerous negative examinations. One of the methods of digesting the sputum or of concentration, of which there are many in use, should be tried.

We use at Colon Hospital a modification of antiformin recommended by Uhlenhuth.[12] Antiformin was recently described in THE JOURNAL (Jan. 7, 1911, p. 43). It is a mixture of equal parts of sodium hypochlorite (Labarraque's solution) and 15 per cent. sodium hydroxid. Potassium hypochlorite (Javelle water) may be substituted for sodium hypochlorite, and this is the formula that we have used at Colon Hospital. Antiformin, 1 part, is added to about 4 parts of sputum, or of diluted sputum, and the mixture is incubated for from four to twenty-four hours, the sediment is washed and centrifugalized one or more times, and smears made and stained in the usual way. Most of the solid material of the sputum is dissolved and all bacteria except those of the acid-fast group. Antiformin does not affect the staining properties or even the viability, within a limited time, of tubercle bacilli. Pure cultures of the tubercle bacillus may be obtained from the sputum by treating it with antiformin, washing the residue with sterile salt solution, and transplanting on suitable media. Brown[13] has recently reported the result of examinations of fifty specimens of sputum by this method; thirty-five specimens showed tubercle bacilli, and cultures were obtained from thirty-three, or 97 per cent.; in fifteen specimens no tubercle bacilli could be found microscopically, but cultures were obtained from four, or 27 per cent. I have found it useful as a method of concentration, and have been able to find bacilli in specimens negative by the ordinary technic.

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[10] Ztschr. f. Klin. Med., Berlin, lxix, No. 3; abstr. in THE JOURNAL A. M. A., 1910, liv, 662.

[11] Waller: Am. Jour. Med. Sc., 1909, cxxxvii, 526.

[12] Uhlenhuth: Med. Klin., Berl, 1909, v, 129.

TUBERCULIN TESTS

Regarding the cutaneous and conjunctival tuberculin tests, my experience agrees with that of Hamman and Wolman,[14] who have recently published the results of 1,500 simultaneous cutaneous (with 20 and 100 per cent. O. T.) and conjunctival (with 1 and 5 per cent. O. T.) tests made in the Phipps Dispensary, Baltimore, by a uniform method. They found that of clinically non-tuberculous patients only 1.6 per cent. reacted to the conjunctival test with 1 per cent. Old Tuberculin, and of the certainly tuberculous in all stages, about 70 per cent. reacted. The number of reactions to the cutaneous test with 20 and 100 per cent. Old Tuberculin in the group of clinically non-tuberculous was so great as to render valueless the test as a positive diagnostic measure, although when the test is negative it almost excludes tuberculosis. They conclude that the conjunctival test with 1 per cent. Old Tuberculin is without danger when proper care is exercised; that when the test is positive and there are suspicious symptoms or signs the patient should be treated for tuberculosis; that when it is positive without symptoms or signs, the patient should be kept under close medical supervision; that when the test is negative the result is not of great significance. If the conjunctival test is negative then the cutaneous test may be tried. If the latter is positive, the two tests yield no significant information; if negative, however, the chances are tremendously against tuberculosis. They did not find that the cutaneous test with 1 and 5 per cent. Old Tuberculin yielded significant diagnostic information.

My experience with the cutaneous (strong tuberculin) and conjunctival tests coincides with the above conclusions. I have not had a sufficiently extensive experience with weak dilutions in the cutaneous test to draw conclusions from, but Baldwin,[15] of Saranac Lake, thinks that with weak dilutions as much information can be obtained from it as from the conjunctival test, the use of which he had abandoned in the summer of 1909.

The percentage of positive reactions from the conjunctival test in the clinically non-tuberculous obtained by Hamman and Wolman is very low compared with the percentage obtained by other investigators, 18 to 25 per cent. This may be due to the fact that they used 1 per cent. Old Tuberculin instead of the precipitated tuberculin, which is stronger, and possibly they were more stringent in ruling out suspicious cases, for other large series reported have usually been compilations.

RADIOGRAPHY

In the hands of an expert, radiography is conceded to be a valuable procedure for early diagnosis, especially in determining the extent of disease. It cannot supplant the other measures, however, and its results are of significance only when they confirm the findings of other careful examinations. It is useful in determining the extent of the lesions, and it may be especially helpful in revealing diseased peribronchial glands.[16] It is most helpful, however, since confirmation of diagnosis by it establishes confidence in the interpretation of early signs.

DIAGNOSIS

In a short treatise on a disease with such numbers of variable symptoms and signs it is impossible to discuss in detail the combinations that justify a diagnosis, or that should excite a strong suspicion of active early tuberculosis. I shall mention, then, only the combinations that in my experience have been most common.

First, a persistent slight cough, with or without a little morning mucopurulent expectoration, and with an afternoon temperature of 99 to 99.5 F. Rest in the hospital usually causes the slight fever to subside within a week, but occasionally it persists for several weeks. On examination there is usually found a slightly shortened, high-pitched percussion note in the supraclavicular, infraclavicular or upper interscapular regions, and the apical outline is a little narrowed on the affected side. The breath sounds may be normal or harsh with prolonged expiration, but a few fine râles are heard at the end of deep inspiration. A positive ophthalmic test with 1 per cent. Old Tuberculin strengthens the diagnosis, but a negative test has little value. The case remains suspicious even if the cutaneous tuberculin test is negative with 100 per cent. Old Tuberculin. The diagnosis is positive if the conjunctival test is negative and the cutaneous test is positive. Tubercle bacilli are not often found, but in a few cases repeated search may demonstrate them, or they may be found by the antiformin concentration method.

A second group of patients complain of feeling "run down," their appetite has fallen off, they have indigestion, are "nervous," and sleep badly. They may have no cough or expectoration, and no fever, but usually they have lost a little weight. The physical signs are generally like those of the first group. Sometimes the apices are normal, but persistent râles on abdominal breathing are present in the fifth or sixth interspace below the nipple or in the infra-axillary space, and a wavy inspiratory murmur may be present. There is usually tenderness on pressure in the interspaces. The tuberculin tests have the same value as in the first group.

In a third group the onset is with a pleurisy, which may be dry or associated with an effusion. Fever is usually present, but may be absent, and cough may or may not be present. The majority of these patients react to the conjunctival tuberculin test. It is now generally conceded that the spontaneous pleurisies are of tuberculous origin in the vast majority of cases.

These three groups include the majority of early cases in my experience. There may be, of course, an infinite variety of combinations in which symptoms and signs are so numerous and variable, but other combinations are usually made by striking symptoms, such as hemoptysis, laryngitis, etc., added to the above combinations as bases. In fact, the groups outlined might well be called basic groups.

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[13] Brown, L.: Jour. Med. Research, 1910, xxii, 517.

[14] Hamman and Wolman: Arch. Int. Med., 1910, vi, 690.

[15] Personal communication.

[16] Stoll: Am. Jour. Med. Sc., 1911, cxli, 83.

The two conditions that most frequently cause confusion, and that really offer the only serious difficulty, are influenza and neurasthenia, the former by reason of symptoms, and sometimes signs, the latter by symptoms. Influenza may produce râles limited to the apices and harsh breathing, and it is possible that these may sometimes be unilateral. But I have never seen other changes produced by it except in severe acute infections with bronchopneumonia, and in bronchiectasis. In these cases the absence of tubercle bacilli, the character of the sputum, the presence of influenza bacilli, and the negative conjunctival tuberculin test should clear up the diagnosis. Neurasthenia should never be diagnosed without the careful exclusion of physical signs of tuberculosis and a negative conjunctival tuberculin test with 1 per cent. Old Tuberculin.

CONCLUSION

Tuberculosis is the most common of all diseases and causes a greater number of deaths than any other. Failure to diagnose it early is disastrous and reprehensible. Physicians should have a more thorough knowledge of it than of any other disease, and they should be trained in the highest degree in the methods used for its diagnosis in the early stage.

The greatest hope for the ultimate control of tuberculosis lies in the education of physicians in its early diagnosis, and, what will follow, the education of the public in accepting and not resenting or feeling disgraced by such a diagnosis. The public must be taught that the outlook is more hopeful the earlier the disease is recognized; the old terror that grew up from familiarity with the disease when it was diagnosed only in the hopeless, pitiable and repulsive stage must be dispelled.

I wish to thank Colonel William C. Gorgas, Chief Sanitary Officer, for permission to publish this paper.

NOTE.—Since this paper was written there has been published "A Report of the Tuberculosis Situation in Pennsylvania in 1909," by J. Byron Deacon (THE JOURNAL A. M. A., Feb. 4, 1911, p. 339). Deacon points out that in 1907, the latest year for which morbidity statistics have been issued, there were only 6,109 living tuberculous patients reported, while the deaths numbered 4,700 more, or 10,809. "On the commonly accepted supposition that for each death from tuberculosis there are at least three other persons sick from the disease, there were probably no less than 40,000 cases in Pennsylvania last year." Deducting the 10,809 deaths, there are left approximately 30,000 living patients, only about 6,000 of whose cases, or 1 in 5, were reported. But these figures may be misleading, for the 40,000 cases probably include many old cases that may have already been reported in previous years. I do not suppose that the law requires a new report of the old cases to be made each year. A more accurate way of estimating the number of unreported cases would be, then, to estimate the number of new cases and to deduct the 6,109 reported cases. It seems fair to assume that the average number of cases in Pennsylvania remains approximately the same from year to year, that is, that a sufficient number of new cases develop to replace those lost by deaths and recoveries. There were 10,809 cases eliminated by death in 1907. It is probable that at least half as many patients with demonstrable signs recovered. To replace these there must have developed approximately 16,000 new cases, of which only 6,109 were reported. Is one to suppose that the 24,000 or 10,000 cases were undiagnosed, or that they were diagnosed and not reported, in utter disregard of the law? The most charitable assumption is the former, but in either case the figures are a sad commentary on the condition of affairs in the relatively enlightened medical center, the State of Pennsylvania.

THE NEED OF THE EARLY DIAGNOSIS OF TUBERCULOSIS FROM THE PUBLIC HEALTH AND PROGNOSTIC POINTS OF VIEW *

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The title under which I have elected to participate in this consideration of tuberculosis in a sense removes the subject from the realm of broad popular discussion and restricts it to professional discussion, as bearing on the responsibility of the physician in the campaign which has awakened such world-wide interest among the laity. The speculations which claim our attention belong to the profession and do not directly concern the laity, yet it is impossible absolutely to separate from the field of legitimate public interest any of our conclusions or acts with regard to the prevention or cure of this disease. As a matter of fact, we have progressed too far in the study of disease and in the accumulation of exact information to be able to carry out the dictates of our knowledge single-handed. We have long recognized the necessity of taking the public into our confidence and asking its cooperation in accomplishing the great task of advancing human welfare along the many lines which so clearly lie before us. "With the progress of thought there has come a growing curiosity on the part of the layman to know more of the physiology and pathology of life," and we find a public which is only too glad to "learn more of what medical science can teach of everyday life in so far as it can tell how best to avoid and so prevent" disease processes which, when once established, prove themselves to be intractable or irremediable at the hands of medicine. Nobody will presume to gainsay the availability of such assistance in what should really be, in the first instance, our endeavor and not theirs. The question is, Are we doing our full share in the work which has been initiated, and are we deserving of the support in money and willing hands which is being offered on all sides? I am most emphatically of the opinion that we are not, and there is abundant evidence, which "he who runs may read," that we are not only not taking our proper group place in the vanguard— not even doing our share (irrespective of relative qualifications as between the profession and the lay public)—but are actually, by the repeated individual neglect of a plain duty, constituting ourselves a drag on the movement to emancipate the world from this insidious foe, very aptly characterized "the great white plague." It is time for us to obey the behests of those who, like Girdwood,[1] realize what the public has a right to expect of the profession, and the physician's responsibility to patient and to society.

We have been, perhaps, a little overdone, a little dazed of late years by the spectacle of what might not immoderately be termed a wild crusade against consumption and other insidious enemies of health. We have been blinded by a blaze of brilliant display, and we have been deafened to reason by a blare of revivalistic appeal. We have lost our sense of proportion—our perspective—our power of introspection. It is time to pause in the flight for striking effect and do a little of that drudgery in first principles that will place us on solid ground in respect to the real part we, as members of the medical profession, are to play in the tuberculosis problem.

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* Read at the meeting of the Medical Society of the Isthmian Canal Zone, January, 1911.

[1] Girdwood, John: Responsibility of the Physician in the Campaign Against Tuberculosis, THE JOURNAL A. M. A., Dec. 4, 1909, p. 1881.

The first thing required of us is that we shall present a united front, based on the pathology of the disease, as to the most economical and best method for its prevention and the surest means for its control; and, then, that we shall work together conscientiously in an earnest, intelligent effort to stamp it out of existence as a universal plague. Let the philanthropic layman, the educator, the social worker, the hygienist, and the sanitarian, exert their energies under scientific advice toward ordering the lives and habits and surroundings of the people; for the physician there is the primary duty of making a diagnosis, and that an early diagnosis. This is the most efficient weapon at his command in leading the great undertaking and in discharging his obligation, both in the interest of public health and a good prognosis for his patient. It is a weapon which must be used fearlessly, for in it alone do we find the backbone of a practical campaign.

It is the one means of robbing the disease of its terror, and of quieting the panic which the mere mention of the word tuberculosis has always excited. To have, or to have had, tuberculosis has been in the past, and is now, regarded as a stigma, which has been a potent influence in the development of a disposition to conceal the disease. And the large majority of physicians have humored the people in this erroneous idea and all too willingly lent themselves to the deception. It is a false kindness to doubt and ignore or conceal the facts to which the findings in a physical examination clearly point. If the symptom-complex of tuberculosis is sufficiently complete to warrant a reasonable suspicion of the disease, far better to tell the whole truth and make a confidant of your patient in the hope—nay, certainty, of enlisting his help—than cheerfully to disarm the finding of anything suggestive simply because the picture seems incomplete by the absence of microscopic proof. There are comparatively few advanced spirits who have the courage of their convictions in this direction and are willing to be dubbed as "hipped" on the subject—the victims of "tuberculophobia," as they often are, because bacilli are not found in the sputum, or the subject of their diagnosis is not in a hopeless condition of advanced disease, or because their patients return to active life, rosy and fat and nervously stable, after only a few months under that therapeutic triad—rest, fresh air, and good nourishing food. These men may be ridiculed, but, mark my word, they are the ones who are training the public to regard tuberculosis from a sane point of view; they are the pioneers and founders of the real campaign against tuberculosis; they are the ones who, though perhaps occasionally erring on the right side, are bringing about a decreasing percentage in the mortality statistics.

I am conscious of the fact that I am setting down some very old and familiar truths, albeit in a new form, perhaps, but I think the circumstances and conditions we are facing warrant their reiteration with emphasis as often as may be required to awaken us to a realization of our shortcomings in respect to our duty, and to the end that we may not do less well than we may, or less well than may be reasonably expected of us by our patients and by society.

I shall not discuss the symptoms and signs which constitute a sufficient picture for the early diagnosis of tuberculosis. Suffice it to say that "the presence of tubercle bacilli in the sputum can only confirm that which should have been discovered in all probability months before by careful and systematic physical examination. . . . If we wait for microscopic demonstration of tubercle bacilli in the sputum, in order to make a diagnosis in suspected cases of this disease, our patients in the vast majority of instances will be so far advanced as to almost preclude the possibility of a permanent cure."[2]

It is, however, within my province to ask wherein we have failed to prepare our minds, to train our abilities, and to take advantage of facilities favorable to an early diagnosis. I have already touched on the first factor of this inquiry, but I think it will bear the further remark that far too often has our fear of losing a case influenced us to close our eyes to the meaning of facts we have discovered. We hesitate to stigmatize a patient by the pronouncement that he is the subject of tuberculosis. We even delay submitting ourselves to an examination, if there is a suspicion of tuberculosis, in the unreasonable and cowardly fear that the suspicion will be verified, when, as a matter of fact, the stigma involved is that which rests on the physician who fails to make an early diagnosis, and the only need of fear is that a patient may be permitted, in the absence of a timely warning, to progress so far in the disease that he is denied that fair chance to regain health to which he is entitled. If it is fear of alarming our patients which makes us hesitate to tell the truth, I think we can put our minds at rest. "It will not be so great a shock if we are able to say that the disease is in its early stages, and that proper treatment, adopted at once, will restore him to health."[1] With the present tendency to be overcautious in making a diagnosis of incipient tuberculosis, there is no danger of magnifying the import of symptoms and signs. There is little or no harm done by the occasional mistake in this direction, but there is infinite harm done by the delay incident to a dependence on that evidence which may develop late and which, while constituting conclusive proof of the disease, is also often the symbol of an approaching end, or, at least, prolonged invalidism. The very first step toward paving the way for an effective general campaign must be taken by us, for it is the patient with the advanced case with the bacilli in his sputum who is a menace to the community. The prerequisite in fulfilling our duty to the patient and the public is a willingness to make an early diagnosis, and not only that, but fearlessly to state our convictions in accordance with the highest ideals of professional altruism as against the commercial spirit that is animating so many. It is high time to rid ourselves of false notions and selfish impulses—to clear our vision—and unite in a right-minded attitude in this matter.

And now as to our ability to measure up to any standard of harmonious action along the above-mentioned lines, which we may see fit to agree on. "Of all the means to the early detection of pulmonary tuberculosis, the art of physical diagnosis (together with an eye for early symptoms) is preeminently the foundation on which a diagnosis depends."[2] This cannot be too strongly insisted on, and any neglect of it in dealing with this disease is a most unpardonable form of malpractice.

Greater experience with the *x*-ray, with Calmette's ophthalmic reaction, with von Pirquet's skin reaction, and with the subcutaneous use of tuberculin has given them only an associated importance and corroborative value as diagnostic agents in the early stages of tuberculosis. Yet these and the microscope are too often employed as excuses to evade the older and more arduous task of eliciting the evidence appreciable by our senses in palpation, percussion and auscultation.

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[2] Wright, B. L.: A Plea for the Early Diagnosis of Pulmonary Tuberculosis, Mil. Surgeon, xxiv, 75.

Taking it as an accepted fact that the above laboratory procedures are mere aids, the early diagnosis of pulmonary tuberculosis must rest on the careful and thorough physical examination of the suspect (it may have to be repeated several times before definite lesions can be detected); and, in turn, our ability to make an early diagnosis of pulmonary tuberculosis is conditional on our familiarity, first, with the signs of the normal chest —the music of the chest, as it has been poetically styled —and then, with the many types and degrees of variation from the normal signs attendant on disease. This being the case, it is remarkable that the art of physical diagnosis is given such scant attention in our medical schools and that the meager training with which we are equipped when launched in the midst of an unsuspecting public is so neglected by members of the profession, in both civil and military life. There is, indeed, a woful ignorance of those essentials to be practiced at the bedside; "an inability properly to make a physical examination, or to correctly interpret the physical signs obtained by such examination; and, I regret to say, the normal physical signs (particularly in the region of the chest) as elicited by the various methods employed in physical diagnosis."[2] are a closed book, as far as any practical advantage is concerned, to a shockingly large number of practicing physicians. This statement might strike any group of offenders as an insulting exaggeration, but resentment is only an admission of the lack of an active appreciation of the value of high development along these lines. Such physicians probably do know the appearance, the touch sensations, and the sounds to the extent of being able to detect gross variations from the normal, but in most diseases, as in tuberculosis, it is the fine variations which are of importance and the ones which offer us timely information. It is just here, I repeat, that most physicians fall short in training and capability to deserve the confidence of their patients. This conclusion becomes inevitable when we investigate "the statistics of the civil hospitals and sanitariums throughout this country, if not throughout the world, which receive this class of patients," and of the different insurance companies,[3] all indicating that large numbers of individuals have been accepted for admission or protection in advanced stages of the disease. Post-mortem records point in the same general direction. "That it is true of the military services, as well, is a most lamentable fact that cannot, I believe, be disputed"[2]—certainly not by our Navy. It was, for example, reported by Wright in January, 1909, that " in only four or five instances out of the ninety-nine patients admitted" to the U. S. Naval Sanitarium at Las Animas, Colorado, from the time of its establishment to that date, did the medical officers transferring them give any evidence of having attempted to localize the diseased areas. Of the remaining ninety-five or ninety-six cases the information furnished was of the most meager character, the diagnosis apparently having "awaited the microscopic findings," and having been determined much too late to offer any hope of recovery, or, "in many cases, the prolongation of life beyond a period of months." I may say that following the publication of these facts, together with an appeal for the early diagnosis of pulmonary tuberculosis, new interest in the disease was awakened throughout the Medical Corps of the Navy, and I believe that records will show that an improvement is being realized.

While such apathy, indifference and even hostility, as above indicated, are displayed by so many physicians in civil and military circles, the number of victims to tuberculosis will show little decrease, and, what is more to the point, "until such time as the diagnosis is made by the early [symptoms and] physical signs and the admission ticket bears the phrase 'Sputum negative for T. B.,' instead of that (usually) deadly sentence, 'Tubercle bacilli have been found in the sputum,'" society will continue needlessly burdened with the care and support of those, who, had an early diagnosis been made, might have been cured by the arrest of the disease, and saved to the world as "useful citizens in their various walks of life." The expense and loss of time to the individual, the family and the state incident to a tardy diagnosis represents a criminal waste which complicates the already serious economic problems of the age. There is a business principle involved as well as a humane dictate. The relief which is demanded is within our power to give. The public has a right to expect it of us individually and collectively, and by recognizing our plain duty we shall be removing one of the greatest obstacles to the successful prosecution of the fight against the most devastating enemy of the human race.

The third inquiry which I wish to bring home to you concerns the secondary or collateral measures for diagnosis. Are we, in the presence of inconclusive physical data, availing ourselves of every facility placed within reach by the health departments of cities or by institutions to verify or allay suspicion?

In previous references to the examination of sputum I may have seemed to underrate it as a proper measure in early diagnosis. This I had no intention of doing except by way of more effectively emphasizing the importance of a greater dependence on observed early symptoms and early physical signs. Although tubercle bacilli are not to be expected in the sputum until there has been some destruction of lung tissue, they are sometimes found very early in the disease and should, therefore, be invariably sought as a positive proof of the existence of the disease. It is to be kept in mind, however, that failure to find tubercle bacilli in the sputum does not exclude the possibility of the disease, as they may be absent from the sputum, or they may not be found microscopically. Reward in the search for positive proof, which so many of us unfortunately wait on, may be forthcoming only after repeated examination, yet the large number of physicians who entirely neglect this measure of diagnostic precision provided by the city laboratory, or who practically do so by resting content and pluming themselves that they have done their duty in requesting the examination of a single specimen is very clearly shown in the figures gathered by Girdwood.[1] In the course of his paper, after allowing for errors in calculation, he says, "I think it may be safely estimated that 50 per cent. of practitioners do not avail themselves of this privilege." If the neglect of this long-known measure is so prevalent, how certain we can be that the tuberculin, ophthalmic, and skin tests, one being corroborative of the other, and all being valuable as mile-stones along the route to an early diagnosis, are also neglected.

I repeat, therefore, that the profession is, broadly speaking, guilty of at least three offenses in relation to a timely diagnosis of tuberculosis, and to the rôle which we must play in the campaign against the disease, if success is to follow the movement. To summarize:

1. The profession is not educated to the point of a right-minded, morally fearless and pecuniarily unselfish attitude toward the early diagnosis of pulmonary tuberculosis.

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[3] Greene, C. L.: Medical Aspects of Life Insurance, Osler's Modern Medicine, Vol. vi, Part vi, p. 760.

2. The profession does not, or will not, fully realize the importance of the information to be gained by giving careful attention to early symptoms, and is, with inexcusable carelessness, not taking advantage, or has not trained itself to take advantage of the valuable signs to be elicited by the art of physical diagnosis as constituting the real basis on which a timely diagnosis is to be made.

3. The profession is not availing itself of those valuable corroborative tests which science has placed at our disposal as aids to the early diagnosis of tuberculosis and which should be generally adopted.

The insurgent movement in professional circles which has been inaugurated in support of reforms along these lines must win recruits and gain in force if we are to live with our *heads up straight and our hands clean.*

THE FOLLY OF SENDING TUBERCULOUS PATIENTS AWAY FROM MEDICAL SUPERVISION [*]

JOSEPH WALSH, M.D.

PHILADELPHIA

Case 1.—Mrs. N., aged 44, in well-to-do circumstances, came to my office Oct. 14, 1907. She had been perfectly well until four months previously, when she developed symptoms of cough, expectoration, etc., and her physician told her that she had tuberculosis of the lungs and that she should go to the country. This was the complete advice he gave her, telling her neither where to go nor what to do. Being a woman of intelligence, she made inquiries among lay people and heard, among other places, of a town in a neighboring state in which there is a large sanatorium for tuberculous patients. She went to this town, which contains a number of physicians experienced in the treatment of tuberculosis, but having been given no advice about what to do and no directions about seeing a physician, she thought it was necessary only to remain in the town until she got well. She remained four months, and, finding that she had not improved, she consulted a physician connected with the sanatorium who told her her exact condition and described what she ought to have been doing, but had not been doing during the past four months.

The patient had moderately advanced tuberculosis and I have no doubt. especially in the light of subsequent events, that if she had been under the care of this physician during these four months she would have recovered, but after finding that she had wasted four months she became so disheartened and so homesick that she felt obliged to come home for a while, even though, as she said, it might be attended by serious consequences.

She asked now if she might not be treated at home, assuring me that if she did not do well she would be willing to go to a sanatorium. She was not only a woman of intelligence, but of perseverance, and in six months the disease was "arrested," the cough and expectoration practically stopped, and she had advanced in weight from 118 pounds to 137. She has remained in this apparently cured condition for the past three years.

Case 2.—T. M., a single man, aged 23, medical student, first consulted me Sept. 13, 1906. He said that the previous December he had been advised by an eminent physician to go west and keep in the open air, and to exercise. He was a strong, characterful young man and followed directions implicitly, riding horse-back and walking continuously, only to find at the end of five months that he was distinctly worse. On consultation with a physician in Texas, who knew something about tuberculosis, he was told that he should have been on rest the whole period. Discouraged and disheartened he came east, but his five months' definitely improper régime and the trips west and east had done their work. He was in a critical condition when I saw him and rapidly deteriorated till he died.

Case 3.—F. G., a man aged 40, married, machinist, went to the White Haven Sanatorium, March, 1910, with advanced tuberculosis of both lungs. None of his friends expected him to recover. He was so well four months later, namely, in July, that he insisted on going home for a few days. His friends were surprised at his splendid condition and realizing now his capability of recovery thought they would clinch the matter by sending him west. Though he was a poor man, these friends made up a purse of $800 and sent him west. Three months later he returned east in the hope of being able to enter the White Haven Sanatorium again, but he was so ill on arrival at his home that he could not be moved and he died several weeks later. The patient himself stated in regard to his retrogression, that the trip west on the train started it. He did not know what to do when he arrived there, fell into the hands of a physician who knew no more about tuberculosis than himself, and finally after spending his $800 in three months he came east and the trip eastward finished him.

The result in the first case shows that there was no necessity for the patient leaving home; in the last case the patient was in the proper place and was advised away from it, and all three cases are typical of the folly of sending patients away from continuous medical supervision. Every physician who sees many tuberculous patients has numerous similar histories of patients who die. not on account of susceptibility, but on account of improper or insufficient direction.

To recover from a tuberculous condition which is manifesting symptoms sufficient to bring the patient to a physician requires at the least months of a careful régime, which changes with the improvement or retrogression in the disease and with the occurrence of complications like a cold. Not one patient in a hundred can be directed at the beginning along a course that will not require modification, and modification sufficient to make the difference between life and death if it is not followed out.

Two of these three patients went to country hotels. I know of no course worse than to send a patient to a country hotel or farmhouse away from direct medical supervision. In the farmhouse or in the hotel it is usually necessary for the patient to conceal his condition. He is, therefore, prevented from using sputum cups, uses instead his handkerchief and sometimes even is obliged to swallow his sputum, thereby putting himself in the danger of continual reinfection. In addition he is even afraid to carry out in their entirety the precepts that he himself understands, fearing, on account of the general knowledge of tuberculosis, that those around him will recognize his condition. At home or in a sanatorium the people about the patient are not only desirous of seeing him get well, but, understanding his condition, help him to carry out the régime. At the farmhouse or country hotel he is so anxious to conceal his condition that he is encouraged in just the opposite direction.

Moreover, to send a patient to a farmhouse in which the family is willing to take a case of tuberculosis has no further advantages. In this case the people have usually had tuberculous patients previously, and have some ideas relative to the disease. These ideas are frequently wrong, yet wishing the patient well they endeavor to instruct him. Any sick individual is more or less at the mercy of the well people about him; if they insist on certain things he has not the will-power to resist. Unless the physician, therefore, is paying very close attention, the patient will be following these other directions. Some patients have so much recuperative power that despite the disadvantages of the farmhouse they improve, but the number of these is small compared with the number of patients who fail to improve in the farmhouse, and yet on being sent to a sanatorium get promptly well.

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[*] Read before the Philadelphia County Medical Society, April 12, 1911

My experience is that patients capable of recovery and possessing the proper character to make them persevere in treatment are capable under supervision of getting well anywhere. Patients whose personal will-power is not strong or who on account of circumstances, like business worries or family troubles, are not capable of taking care of themselves at home, should be sent to a sanatorium.

The advantages of a sanatorium do not lie in its situation, but in the ease with which the proper régime is followed in it. In the home or farmhouse or country hotel, the people are going to bed at the time suitable for well people; they are, if the weather is cool, living in confined rooms; they are amusing themselves by indoor occupations and they are eating meals suitable for active laborers. In order to follow out a régime in which rest, fresh air and special food are the important factors, the patient is obliged practically to separate himself entirely from the family, and on his own initiative retire while the others are amusing themselves, sit out alone while others are experiencing the comfort of indoors, and refuse dainties which he sees others enjoying; all this requires an amount of character that few people, especially sick people, possess. In a sanatorium everyone about the patient is doing just what is proper for the disease; all are retiring at a proper hour, the daily amusements are outside, the meals are specially regulated to requirements so that there is no inducement to remain up late or to stay indoors, or to eat unsuitable articles of food. To do what is wrong at home is very easy; to do what is right requires special initiative on the part of the patient; while the opposite is true in the sanatorium; in fact to do what is wrong in a sanatorium almost requires special malice against oneself.

I believe, therefore, that there are only three things for a physician to do with a tuberculous patient, namely, treat the patient himself, send the patient to another physician or send the patient to a sanatorium; and that the sending of a patient to a farmhouse or country hotel away from supervision is an unjustifiable evasion of the physician's responsibility.

732 Pine Street.

REPORT OF A CASE OF TERTIAN MALARIA, SIMULATING APPENDICITIS

GRAHAM E. HENSON, M.D.

CRESCENT CITY, FLA.

My purpose in reporting the following case is to urge on all practitioners in malarious districts the necessity for the examination of the blood for the malarial parasite, and the value of the procedure as a routine measure. The process of taking a smear, staining, and mounting is a simple matter occupying a very short time. Very often, as in the following case, but a few minutes' examination under the microscope is sufficient to reveal the parasite, where very possibly its existence was considered unlikely. Following such a finding, consideration can then be given the significance of the presence of the parasites, and whether or not they are responsible for the clinical symptoms, not forgetting that in all malarious sections the parasites may be but coincident with other pathologic conditions.

P. L., white, aged 34, a carpenter, unmarried, was suddenly seized with a severe pain in the abdomen at 6 p. m. March 15. I reached his bedside three hours later. He gave no history of having had previous attacks. He was in intense agony; the right abdominal wall was rigid, the right thigh flexed at right angles to his body. He had vomited twice previous to my arrival; there was no chill. Light pressure over the appendix elicited intense pain, and any attempt at deep palpation produced great agony. The temperature was 99.2 F., pulse 90. A tentative diagnosis of appendicular colic was made, half a grain of morphin sulphate administered hypodermatically, 5 grains of calomel administered, all nourishment withheld and a saline ordered for the following morning. The next day, fifteen hours after the initial symptoms, the patient was resting comfortably, but the right rectus remained rigid, and considerable pain was elicited by deep pressure over the appendix. His bowels had been thoroughly moved and his temperature was normal. The patient was warned to remain in bed, to limit his diet to liquids, and, owing to the distance at which he was situated and the time involved in a visit, to advise me if further symptoms developed. The evening of March 17 I was hurriedly sent for, but being absent did not reach his bedside for some hours. An attendant advised me that he had in the morning, become perfectly comfortable, had dressed that afternoon, and left his home. At six that evening, a few hours after leaving home, and just forty-eight hours after the initial attack, he was again seized with intense abdominal pain, accompanied by a severe chill. An hour later his temperature had reached 106 F., and he was semicomatose. I found him some hours later with the abdominal symptoms intensified over those prevailing two days previous. The temperature had by this time fallen to 101, the mental condition was again clear. While all the subjective symptoms pointed to an appendicitis, the temperature curve was not in accord with such a diagnosis. A blood-smear was taken which at daylight I treated with Wright's stain. The first field examined under a 1/12-inch oil immersion lens showed a well-developed hyaline ring form of the tertian type; other fields showed numerous tertian parasites in various stages of development. Ten grains of the quinin sulphate with dilute hydrochloric acid were ordered given three times daily. With the second dose an amelioration of the abdominal symptoms occurred, and in twenty-four hours they had entirely disappeared. The patient recovered rapidly under a continuation of the treatment outlined.

THE DIAGNOSIS OF TUMOR OR ABSCESS FORMATION IN THE TEMPOROSPHENOIDAL LOBES

WITH A REPORT OF A CASE, WITH OPERATION *

FOSTER KENNEDY, M.D., B.CH. (QUEEN'S)

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NEW YORK

This subject is of interest to neurologists and psychiatrists alike; to the former on account of the difficulties with which the diagnosis of lesions of the temporosphenoidal lobes have been associated, and to the latter because of the curious mental states which are very usually engendered.

An examination of pertinent literature shows that a large number of cases of tumor growth in these regions has been recorded, but the diagnosis has been made in only too many instances after the death of the patient, and a man of such wide experience as Byron Bramwell has put on record his opinion that tumors in these areas are the most difficult of all cerebral growths to localize with accuracy.

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* Read before the New York Neurological Society, March, 1911.

This difficulty had its origin in two factors—the rarity of the disease and the comparative latency of the region affected. The last mentioned condition is one which should stimulate us to examine minutely the signs and symptoms of such cases as come under our observation, in order accurately to define a clinical picture whereby to facilitate future diagnosis, and for this reason: The fewer important centers there are in any given brain area, the more likely are surgical procedures to meet with success in that area. The *succès d'estime* associated with the removal of subcortical Rolandic tumors is occasionally chastened by the reduction of the status of the patient to a quite incompetent intellectual and physical condition; but the fact that large neoplasms have been removed from the substance of the right temporosphenoidal lobe with the abolition of all previous symptoms, and the addition of no new ones, makes one insistent that we all—neurologists, psychiatrists—and aurists—conduct our examinations of cases of cerebral disease in such a manner as to preclude the possibility of allowing a single instance of this disease to slip through our diagnostic fingers.

CASE REPORT

Patient.—M. P., a woman, aged 51, was admitted in November to the second medical division of Bellevue Hospital. I am much indebted to Dr. Coleman for permission to report the notes of the case. The patient had been married twenty-three years, and had had eight children, of whom six died young. They were all full-term children; she had had no miscarriages; her previous health had been good. Her intelligence was excellent.

History.—In early June, 1910, when in good health, she went to bed as usual and during sleep had a slight generalized convulsion. She had another similar attack a few hours later. Of neither seizure was there any warning. There was complete loss of consciousness. She was sent to the Lincoln Hospital while still unconscious.

On coming to herself, she had severe left occipital headache. She vomited for some time, but there was no weakness of any of her limbs. She remained in the hospital for three weeks. There were no special phenomena; beyond occasional severe headache, she remained well for three weeks after leaving the hospital. In the middle of July, six weeks after her first attack, she had another generalized fit of greater severity than before. She was taken to the Jersey City Hospital and unconsciousness is alleged to have obtained for three or four days. There were no sequelæ beyond vomiting and headache as before. Two weeks later, she left the hospital apparently well and remained so for six weeks more. In the end of August, when standing in her house, she suddenly felt terribly frightened—"frightened in the stomach"; became dizzy; "everything seemed to turn"; she sat down on the bed, and in a few minutes felt pins and needles in the left fingers, then in the left forearm, then in the arm and shoulders; the tingling was next felt in the left leg also, after which the fingers of the left hand curled up and began to twitch; then the twitching spread to the arm, and subsequently the wrist, and the left elbow was bent and the hand was drawn up. The left leg followed suit, and last of all, she felt the left side of her face twisting and jerking. There was no loss of consciousness. "I could speak if I held my mouth. I kept spitting all the time." The attack lasted perhaps ten minutes. There was weakness in the left arm after the fit was over. In the latter part of the attack she noticed an "awful bad smell like rotten weeds." This lasted a minute or two and was followed, when the fit was over, by vomiting. After the vomiting attack had passed (half an hour after the fit) the smell came again, and at the same time "I felt queer; everything seemed funny and different." Again there was no loss of consciousness. "Then I distinctly saw a woman standing near me to my left. I was afraid of her. I did not know her. She was dressed in blue. She moved and made motions as if she was talking, but I could not hear anything." The queer feeling lasted perhaps twenty-five minutes, but only for a few of these was the woman seen by the patient.

The patient was taken to Long Island College Hospital and remained there for a week, during which time she vomited much and had a great deal of severe headache, which was usually on the left side. She had one fit while there, when in her bath. "Suddenly felt frightened at the heart." Pins and needles were felt in the fingers, forearm, arm and leg; then twitching in the same order. The mouth did not twitch. There was no spitting. The evil smell followed the attack as before. Later, there was profuse vomiting. Duration, ten minutes, with consciousness retained for the whole period. She limped in the left leg on leaving the bath-room and both the left arm and leg felt very weak.

During the weeks following her stay in the Long Island Hospital, the patient had frequent subjective sensations of an offensive odor as before. The woman always appeared to her left, always in blue, and always frightened her. "I always felt queer before I saw her. The queer feeling usually lasted perhaps a quarter of an hour." There were no motor fits then, but headaches became severe. "The smell came often and was disgusting." (She used to wipe her mouth with a handkerchief to get rid of it.) "I do not know whether it was in the mouth or in the nose."

The left arm and left leg gradually became weaker and in October the patient began to have burning pain in the left arm and hand and, to a less extent, in the left trunk and the left leg. "If I put my left hand in hot or cold water the pain was terrible!"

At this time, she began to keep a shawl wrapped round the left arm to obviate the pain produced by cold draughts of air on the arm. In the middle of October she had another left-sided focal fit, followed by the evil smell and apparition. After this attack, the arm and leg were definitely weaker. "I could hardly walk at all." About the same time, she noticed a "crawling sort of movement" in the left fingers which was present apart from the attacks. Headaches became more severe and the burning pain in the left side of the body became worse. The patient had no fits or subjective sensations of smell or sight when under observation in Bellevue Hospital.

The synopsis of the neurologic examination is as follows:

Examination.—The patient's intelligence was acute; there was no speech defect of any kind whatsoever.

Special Senses: Taste and hearing and acuity of vision were normal. The patient was able to distinguish odors but could not name them, this possibly being due to a general depression of the olfactory centers. There were no changes at any time in the optic disks. There was left hemianopia, which was complete up to fixation point. Beyond inequality of the pupils, there were no other eye abnormalities.

The left side of the face showed considerable weakness, chiefly confined to the lower part of the face, and with no alteration in the electrical reactions in the muscles.

There were no abnormalities in the limbs of the right side.

The left upper extremity was very spastic and profoundly weak and the fingers and hand of that arm showed typical athetotic movement.

In the same arm there was profound sensory ataxia.

The left leg also was very weak and spastic but showed no athetosis.

The patient could not walk alone and disliked putting the left foot on the ground because of the increase of pain in the foot induced thereby.

Sensory examination showed complete lack of appreciation of light pin-prick and cotton-wool touch on the *left side of* the trunk, the left side of the face and the left arm [illegible] The patient was unable to appreciate tem[illegible] side of the body, but cold was inst[illegible] reflexes and intense diffuse pain [illegible] being most marked in the le[illegible] wrung out of cold water laid [illegible] her intensely. There was [illegible] in all the joints of the le[illegible] of the left foot. Gentle [illegible] side was resented beca[illegible]

Reflexes, upper extr[illegible] on right; abdominal [illegible]

ously, and have
These ideas are fre-
the patient well they
Any sick individual is mor
well people about him; if the
he has not the will-power t
ysician, therefore, is paying ver
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patients have so much recuperat
the disadvantages of the farmho

fat and abdominal wall is flabby. Knee-jerks: right equal to the left. Ankle-jerks: only occasionally present. Plantars: right of flexor type, left of extensor type. She had no sphincter trouble.

Circulatory, pulmonary and alimentary systems were normal.

The progress of the case in the hospital was uneventful. No attacks took place; left-sided weakness, athetosis, and pain became more and more marked; headache and nausea increased; no pathologic change occurred in the optic disks.

Operation and Results.—The patient's objections to operation were at last overcome, and Dr. Hartwell made a large osteoplastic flap over the posterior part of the right temporosphenoidal lobe. At the first stage of the operation, the dura was not opened, but the finger was able to detect on the under surface of the dura a large lobulated mass of distinctly pathologic consistency. A week later the wound was reopened and the dura incised. The posterior parts of the upper and middle temporal gyri were found to be the seat of a knobby growth of great hardness which was so intimately connected with the dura that this membrane had to be removed entirely in the neighborhood of the neoplasm, which was itself completely taken away.

Immediate results were excellent; athetosis disappeared and subjective pain in the left arm and leg became much diminished. Headache had been relieved from the date of the first stage of the operation.

Two days after the second stage, the patient had a severe Jacksonian fit on the left side, and this was repeated perhaps eight or ten times in the succeeding three weeks; in none of these was postepileptic weakness at all marked in the affected limbs. These attacks were looked on as resulting from a transient edema of the exposed convolutions and the annectent gyri and were not therefore regarded as being of serious prognostic import. She was discharged from the hospital some six weeks after the removal of the growth, without headache and with power and sensation almost completely restored to the left arm and leg.

The diagnosis in this case was, of course, exceedingly easy; it is seldom that in one individual one finds collected together nearly all the signs on which one must rely, but just for this reason the case has seemed to me to be a proper one with which to open a discussion on the symptomatology of gross lesions of the temporal lobes.

The convulsive seizures were in this case particularly characteristic, and the sequence of the various centers attacked was so anatomically and physiologically exact as to make very clear the localization of the primary epileptogenetic center. These attacks began, as you will have noticed, with an aura of fear—referred more especially to the epigastrium—then "spread" took place upward and forward, producing first a sensory and later a motor focal epileptic attack by means of irritation of the postcentral and of the precentral gyri. In the meantime spread of the stimulus was occurring in a directly forward direction, and by the time the motor fit had almost exhausted itself, there was produced a true uncinate fit—a subjective sensation of a foul odor—"like rotten weeds"—which was so intense as to produce intense nausea and vomiting. In many of the attacks, there was associated with this phenomenon that most curious of psychic conditions, a true dreamy state in which consciousness, though retained, is strangely transformed, and in which the relationship between the individual and the external world becomes apparently altered in a manner too subtle for concrete description.

In this respect, my patient contented herself by saying that she "felt queer," that "everything seemed funny and different," but this failure to portray her defective objective consciousness was almost made up for by her clear-cut description of the result of her increased subjective consciousness, namely, the projection of her submerged memory of a woman dressed in blue, who caused her fear.

Doubtless these "voluminous mental states," as they were named by Dr. Hughlings Jackson, frequently accompany so-called idiopathic epilepsy, but it is noteworthy that when incoordinated sensory resuscitations of this nature have occurred, and organic intracranial disease has later been found to have been present, the lesion has invariably been found to have been situated in the temporal lobe; in a series of nine proved cases of tumor of the temporosphenoidal lobe of one or other side, I obtained a clear history of the incidence of dreamy states in seven and of subjective sensations of special sense in eight, and the entire nine patients had had at some period of their histories one or other type of phenomenon.

Owing to the fact that the temporal lobes are vast and uncharted regions containing only one known bilateral center, that of smell and taste, and one unilateral center for the storage of auditory memories in the transverse gyri of Heschl, we are forced in many instances to look for exact localizing signs to the pressure effects of temporal tumors on neighboring structures. In this respect the present case was particularly rich: there were, as you will have observed, well-marked signs of pressure on the pyramidal tract, taking origin in the right cortex, and moreover, the signs of pressure inwards on the right optic thalamus were more marked than I have ever before known to occur.

Many years ago Nothnagel and Bechterew showed the optic thalamus to be an important reflex center for emotional expression and in cases of tumor or abscess of one temporosphenoidal lobe, it is common to find the effect of depression of function of the homolateral thalamus in an abolition or marked diminution of emotional expression in the opposite side of the face, and I have learned to look for such a depression of function in these cases as being of the utmost aid in diagnosis.

There was, however, in the patient under discussion, an almost perfect thalamic syndrome in addition to unequivocal temporosphenoidal signs; there was pyramidal involvement with well-marked athetosis, together with a signal inability to appreciate touch on the affected side, combined with explosive sensibility as regards superficial and deep pain and temperature, and much subjective burning pain of a characteristic nature in the same parts of the body. The lesion in this case was situated much more posteriorly than in any of my nine cases to which I have already referred, and this fact may, to some extent, account for this greater incidence of pressure on the thalamus, as it undoubtedly does for the fact that this was the only case in which hemianopic defect was observed in the contralateral visual field. I would put the significance of hemianopia in this connection according to my own experience as follows: its absence, in the presence of other signs indicative of the temporal lobe, is no reason to waver in this diagnosis, while its presence is amply confirmatory of one's position.

The question of the speech defects in these conditions now requires consideration: for this purpose, our present case is of no value, in that the disease was localized to the right side of the brain. The patient was a right-handed woman, and consequently at no time had she any difficulty in expression. The effects of gradually expanding cerebral lesions on the various centers concerned in our communication with the external world are widely different from those resulting from sudden vascular lesions produced either experimentally or in the course of nature—in these latter, the damaged area is sharply delimited, and within its boundaries, destruction is usually rapid and decisive; in the former, a gradual deterioration of function takes place, producing pathologic speech conditions less obvious, but equally informing.

I lay stress on these facts because in the books it is usual to find the statement that word-deafness is to be expected in cases of tumor or abscess formation in the left temporosphenoidal lobe. This assertion is entirely misleading, in that such a condition can only be brought about by destruction of the transverse gyri of Heschl and the posterior three-fifths of the inferior temporosphenoidal convolution, and such destruction practically never occurs except in the terminal stage when exact diagnosis is useless and unnecessary.

Differences in size, situation and speed of spread of temporal lobe tumors will, of course, produce differences in speech affection, but one feature is constant: a depression of the power to recollect names, especially those of persons, places and things, this discrimination being accounted for by the fact that our conceptions of persons and things are less closely connected with their names than are the abstractions of their circumstances and properties; thus, one patient when shown a familiar gold coin, recognized it as "money—good to have," while an envelope was called by another patient "something to put a letter in."

In these, as in most other cases, there was no real loss of word memory; the memories were intact, but in a degree submerged and capable of being brought up to consciousness only by a great effort of volition or by the aid of an additional cognate auditory or visual stimulus.

Often such a patient has no speech defect in the course of ordinary conversation, but makes frequent mistakes when asked to name familiar objects shown to him: a condition perhaps the most characteristic of all the temporosphenoidal speech defects and dependent on a degradation of function in the association tracts uniting the visual and auditory centers. These naming errors are instantly perceived by the patient and annoy him. The right word is recognized as soon as it is heard, and so far are these people from being word-deaf that an inaccurate prompting is invariably rejected.

I would summarize the outstanding features of this case and of the other nine of which I have spoken, as follows:

SUMMARY

Symptom-Complex of Tumor in the Right Temporosphenoidal Lobe in a Right-Handed Person.—Epileptiform convulsions of varying severity and frequency; dreamy states or analogous pathologic psychic conditions; crude subjective sensations of smell or taste with or without involuntary reflex movements of mastication. Subsequent to major attacks; in most cases, transient weakness of the left lower facial muscles, usually most evident on emotional expression; less often the left arm and leg temporarily paretic; left abdominal reflexes diminished or absent, deep, increased; the left plantar reflex may be of extensor, and the right of flexor type.

Bilateral papilledema usually of greater intensity on the right side. Reflex change and motor symptoms on the left side at first merely postepileptic, but later become persistent phenomena.

No word-forgetfulness after major attacks or at other times. No speech defect whatsoever.

Symptom-Complex of Tumor in the Left Temporosphenoidal Lobe, in a Right-Handed Person.—Difficulty *in naming objects seen and recognized; later, word forgetfulness in conversation; later, inapposite words and phrases, with instant recognition of mistake when made, but inability to prevent perseveration of verbal errors.*

Reading aloud and writing to dictation are well performed; *spontaneous writing poor.*

Epileptiform convulsions of varying severity and frequency; dreamy states or analogous pathologic psychic conditions; crude subjective sensations of smell or taste, with or without involuntary reflex movements of mastication. Subsequent to major attacks; in most cases, *transient weakness of the right lower facial muscles, usually most evident on emotional expression; less often, the right arm and leg temporarily paretic; right abdominal reflexes diminished or absent: deep, increased: the right plantar reflex may be of extensor and the left of flexor type.*

Bilateral papilledema, usually of greater intensity on the left side. Reflex change and motor symptoms on the right side at first are merely postepileptic, but later become persistent phenomena.

The existence of hemianopia would, of course, indicate precisely the side of the lesion.

The case I have described shows in a peculiarly striking manner the methods by which exact diagnosis may be arrived at—not that we may hope to see many cases with finger-posts so generously exhibited, but rather that the signs here so dramatically obvious may in other cases stimulate our inquiry and research along paths, which, at first, apparently vague and rambling, open out eventually to the destined goal.

52 West Fifty-third Street.

SIMPLICITY OF LIVING AND THE STUDY OF THE NORMAL IN MEDICINE *

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If you ask a man to-day why he consults a physician, he will probably reply, "In order to get well." In the next twenty-five years, he will answer, "To avoid getting sick." This growing need for preventive measures in medicine is due in part to the increased knowledge of the laity regarding medical problems. They realize the importance of saving the decay of a vital organ by preventive measures, as they have done for many years in regard to their teeth, their clothes, their houses and property in general. It is also due, however, to the growing complexity of living, which compels us in self defense to study the measures and methods by which we can save ourselves physical and mental strain, relief from fatigue and weariness, both of mind and body.

The present age, fundamentally, does not differ so greatly in many ways from past centuries, except in the scale on which things are thought out and done. We know countries intimately to-day, while our forefathers knew only the towns in which they lived. We know international conditions as well as they knew family conditions. Where they studied one problem, we study a hundred. Where they knew of one disease, we know of fifty, and this applies to the things of every-day observation—the flowers, the birds, the houses, the streets, the food we eat, the different persons we meet, etc.

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* Read before the Baltimore City Medical Society, Joint meeting of Section on Clinical Medicine and Surgery and Medical Examiners' Section, March 17, 1911.

The chief difficulty with modern life is its complexity, and it is this complexity which stamps our present civilization as unique and different from that which has gone before. Complexity of surroundings, fortunately, does not engender, always, complexity of thinking. The simple life is inward as well as outward, and can be lived under the most complex circumstances, just as the most complex and confused lives can be led by persons very obscure, who are existing under the poorest conditions.

There is, however, a happy medium of living, in which both body and mind can work in harmony and to the best advantage of both. In finding this lies the great problem for the coming generations of medical men. An older physician, asked by a patient what he meant by "modern medicine," replied: "My son, it is only old ideas better presented and dressed in a more attractive garb." Who can deny the facts of history, that psychotherapy and the various forms of suggestive therapeutics, dream-interpretation, etc., were practiced in the most remote ages, and often very successfully? Dr. Paul Haupt read to me from original Egyptian sources the treatment of a neurasthenic, or hysterical patient, by methods which would parallel our best treatment of to-day. Everyone knows how the ancient Greeks and other races excelled in athletics and physical development.

I believe, however, that it is left to the human intelligence of the present time to work out the correlation between physical and mental states, and to show what development of each contributes best to the withstanding of the strain of our complex civilization and the furthering of the human race. In another article[1] I have discussed a class which I called the "mind-weary"—people who had lost the faculty of thinking for themselves, or the desire to do so, and who were looking about for some easy solution of, or escape from, modern life's complex problems, and that exhaustion of the mind which leads to mental confusion. Such people are, alas, the dupes of mind-healers and quack methods which promise everything and lull into just a temporary freedom from worry —merely a resting stage of the mind—but like the spore of a plant, liable to burst forth into greater discord and confusion when brought under fresh strain, poor environment or the cruel circumstance, which is the chance in every human existence.

I tried to emphasize in this former paper, as I wish to do here, the importance of giving such patients something which is lasting, like a healthy normal physical body, which will yet survive when they are outside the domain of our influence, or perhaps when we ourselves are forgotten. The duty of a physician to-day does not end with the simple cure of a malady. It is necessary for us in most cases to lead our patients back to the very environment in which they broke down and yet enable them to work again healthfully and hopefully. Few can afford to give up their work, their ambitions and their responsibilities for long periods. It is useless to expect them to do so, or to ask it.

A patient some years ago came to me from an eminent specialist of another city. She had a beginning tuberculous peritonitis, was poor, very young and of a shrinking and most pathetic personality. In addition she was a nervous wreck from worry and pain. The specialist without considering her youth, her temperament, or the fact that she had no friends in the West, ordered her most peremptorily to "the acrid plains of Arizona." He waived aside her feeble protests and held out a most gloomy outlook, if his orders were not instantly obeyed. What the acrid plains of Arizona had to do with her case, is too much for the imagination of anyone to comprehend. Our eminent friend was certainly a victim of mental confusion.

When we consider the volume of misinformation offered to the world, the deluge of unorganized material handed to us daily, the esoteric philosophy, the social problems, the complicated studies given even to our children, or men and women with minds little above them, who can wonder at the existence of mental confusion or mind-weariness? Who can blame persons for taking up Christian Science or any other easy-going solution of the vexatious problems of life—a solution which eliminates all responsibility and even allows a mother to sleep all night without fear, while her child is moaning with pain by her side.

Many of us are bewildered by the numerous vistas open before us. We wish to understand all the sciences, all religions, to sacrifice to all idols, to try all sensations; with what success can well be imagined. The remedy for this mental confusion, or rather the way to prevent it, is for one to select only the work suitable for one's understanding and leave much outside of this undone. It is more what we should forget than what we should learn; and, after all, one idea worked out alone to its fulfilment brings more mental satisfaction than a hundred never completed. The realization of what we are meant to do, and the doing of it, protects us from the clamor of the multitude and the tempting invitations to dive into waters too deep for us to rise out of.

And now to turn from the class called the "mind-weary" and the remedies for mind-weariness to another class, often associated with them, but occasionally found alone, and whom I shall call the "body-weary." I believe, and my experience confirms me in this belief, that most cases of faulty muscular development (outside of accidents, at birth, etc.) arise from methods adopted by a generally weary body to avoid physical fatigue, in the accomplishment of certain work. The round-shouldered schoolboy with the thin chest, weak back muscles and strong pectorals and forearm has acquired this condition from an effort to hold a heavy book for hours in the most comfortable position possible. Similar statements may be made of endless occupations; they are true of the tailor, the cobbler, the factory girl, etc., and of the luxurious class, often obese, with flabby muscles and tired organs, tired of eliminating excess of food; alcoholics; tired of heated rooms and late hours; and last, the trained college athlete; trained to fall almost dead over the tape at the end of a sprint; trained to break records and health together. He is, in fact, the worst-trained individual we can really mention, who develops in one direction to accomplish only what he is called on to do.

While complex conditions generally have a tendency to overwork the mind, they have also a tendency to prevent muscular development, or, at best, to develop special muscles at the expense of others. Means of conveyance keep us from walking, while machinery has taken the place of skilful hands and arms. Long hours of work and dissipation curtail our games and pastimes, which, indeed, especially the outdoor games, are to-day the salvation of the race. Indolent habits thus acquired destroy the desire for all healthful recreations; so if we must work or play, we only care to use the muscles already developed and do that which comes easiest for us to do, without thought of any symmetry.

With all our vaunted modernism, is not our manner of living absurd? The slaves of convention and prejudice, we eat irrationally and without desire, yet know that avidity for food is as important as the food itself. We drink freely any poison handed to us, especially if we do not pay for it (I mean in money; we generally do in other ways). We turn night into day and live in superheated atmospheres, often substituting artificial light for the all-important rays of the sun. We cover our bodies with clothing which is of such nature that it excludes the air, although the therapeutic value of the air bath to the skin is well known. We confine the vital organs and distort the most beautiful form in the world, that of a naturally developed human being, now only found in the ancient records or in certain remote portions of the world, like the Samoan Islands. Where is it possible in civilized countries to find a perfect adult foot, now practically obsolete? That all-round symmetrical development is incompatible with mental development is an absolutely false belief. Such a belief is only another admission of weakness, and significant of the yielding, which is so universal, to the swift current of convention and acquired bad habits. Why we so drift, no really sensible man knows, although he has not as yet been able even to remove his coat in the summer heat. Why? Is it lack of moral courage, or what? I would ask the women, did they not have so many of their own pet conventions.

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[1] New York Med. Jour., Jan. 18, 1908.

The last and perhaps the biggest folly of all, is perpetrated by man, modern man, when he starts in to pollute the very air he breathes with smoke and noxious fumes, with a number of patents lying idly by which he knows uld prevent this hideous mistake—an effort, it almost s, to exterminate himself.

r many years the problems of physical culture in its ing on the general welfare of my patients has been of the greatest interest to me, and especially in nervous and dyspeptic conditions. I feel that my results entitle me to speak with some authority of a problem in the study of which some original methods are justly claimed.

This problem is to find practically the normal average of physical development, under which the individual studied can do the best mental work, or at least that work which he or she is called on to do; in a general way, also, to investigate what articles of food help us most under varying conditions of physical and mental strain; what manner of eating, etc. I have also endeavored to determine what systems of exercise are best in this respect for the average man or woman, and have personally tried a great many, hoping that others might profit by such hard experiences.

In the future, I predict that the physician who does not know some points about physical methods will never make a success. I realize, however, that "a prophet hath no honor in his own country." This point is evidenced by one illustrious colleague who said that it was undignified for a physician to teach patients exercises. Another predicted my injuring, if not killing, the unwary. My mortality column, fortunately, thus far, seems to keep down fairly well. I earnestly wish these critics every success, alone with their pills and dignity, but as for myself I intend to do whatever I can to help those who trust me with their welfare.

The fruits of these investigations are so terribly meager, the problem such a great one and the literature so incomplete, that at present I can do little more than outline what I am trying to accomplish.

The first important thing is for the physician to get a normal physical standard for a man and woman and keep that impression in his mind for instant reference. a standard which, as in everything else, has rather elastic boundaries. This is a possible thing to acquire and is somewhat on a par with the ability (pardon the analogy) to judge a horse, or any other animal, even when considering different races or strains.

How singular it is that physicians claim to make people normal, yet have such poor conceptions of what is normal! A first-class judge of other animals would put us to shame with his knowledge of measurements and strength tests; and yet a dog or a horse is quite as complicated a being, as far as the body is concerned, as a man. No matter what other vast differences exist, as I believe in all reverence they do, we should know the human body perfectly, not so much in its anatomy, which is easily forgotten, but in its capacity. We should know every deviation from normal, under all circumstances and not only when diseased. The patient himself can often tell us this by his own feelings, and, indeed, frequently makes the diagnosis of the disease for us.

We must give the insurance companies and examiners credit for their hard work in compiling insurance statistics, at least as far as men are concerned; less so where women are considered. Only a small proportion of the fair sex take out insurance; more should do so, if only for this reason. No better experience is possible to help us find our normal man than a number of years in insurance work. I owe much to my own practice in this line. The home offices should give the examiners a better chance to check their results by the subsequent histories of all applicants they have examined. Statistics are at best dry reading and especially when compared to the fascinating realms of psychology, etc., and yet can we afford to neglect them?

After getting the normal standard for the persons under observation firmly fixed in mind, the physician should give them a thorough examination; note how they differ from his ideal for them. He should test their endurance, courage and patience, and enthusiasm for physical work. He should do this by setting certain tasks, generally a walk which he knows well, and study the effect. He should watch them unobserved. By degrees, and very slowly, he should add the requisite exercises which he intends that the patient should keep up for some time, possibly for years. He should warn them of the preliminary discombort, weariness and even pain, which most may experience for a week or so, and insist on absolute obedience.

Many persons will follow out a method which has been advised for a little time, and then decide to go on unaided. This is often a serious mistake, especially if the physician has not yet discovered the amount of exercise just sufficient to keep them in condition. It is one of the disheartening things in such work, but cannot be avoided.

For thin, anemic persons, and often in fat patients, I use various forms of hydrotherapy, having preference for cold rather than hot baths. If patients are too weak to begin treatments with active exercise or have any myocardial trouble, etc., rest of shortest possible duration is indicated, with massage, and later resisted movements. I hold that a physician should never prescribe anything he does not know about and he should be certain by personal tests that those he employs are in every respect absolutely efficient.

Later, I add my physical culture movements, which are culled from several systems, including the army setting-up drill; and I also may suggest certain outdoor games suitable to the patient. All this depends on his general condition, capacity for work, and the especial muscles which require development. Here I should like to emphasize one thing, which is that unless one is half-dead there is some form of exercise that is beneficial and essential. The great point is to know when the maximum or the sufficient amount is reached, and what kind is needed. Experience in training alone teaches this. One must frankly set a limit, and waive all responsibility, if one's warning is not obeyed. Unfortunately patients will never say, if they disobey the physician, that the latter advised them to stop or cut down work. All patients require some dieting, forced or restricted. I insist on eating being made a business, and do not like my patients to read letters or talk very much at the table, especially avoiding heated argument. I advise rest before and after meals, sitting up, not reclining or standing, and anticipation of food to be encouraged by the use of the daintiest service, etc.

We are all aware of the effect of nervous conditions on the muscles, often most striking phenomena—the ataxic walk, the flaccid and spastic paralyses, the athetoid movements of certain idiots, cataleptic states, etc.; but we ignore the reverse effects. Dr. H. J. Berkley reminded me the other day that Hodge described over fifteen years ago the wonderful changes in the brain and spinal cord of bees (cell shrinkage and color changes—chromatolysis) after fatigue from flights, the changes being proportioned to the distances covered by the especial bee studied.

Within the past year or so a German, Weichardt, claimed to have found an antitoxin to fatigue by the injection into fresh animals the extracts from fatigued muscles. The antitoxin obtained from this source, he says, will greatly lessen fatigue when given to other animals.

My own experience has proved to me that the development of the muscle sense is the real problem of physical culture, rather than increasing the size of the muscle, which is only necessary to the extent that such a development requires. Muscular coordination brings with it a corresponding coordination of the nervous system; in fact, one cannot be cultivated easily without the other. Any one who has this sense developed is superior in most ways to the one who has not developed it and is less nervous and depressed when under strain.

The wonderful mental and physical powers of the small and insignificant-looking Japanese is due to this muscle sense, developed from his childhood up. The physical and the mental development of the juggler, the sharp-shooter, the lacrosse player, the swimmer, the fencer, golfer and tennis-player are far above those of the weight-lifter or the laborer. The personal courage and general fearlessness of one who has this muscular and nervous coordination is recognized in the army and on the plains. The best rider, the best lasso-thrower, the finest shot, etc., is generally selected for the posts of danger, even when his especial accomplishment is not necessarily required. People with the muscles well under the control of the mind are very often most heroic, as is shown by many examples in history and the present time. Only recently a wonderful little child juggler, out west, went on in her most difficult acts night after night, with an arm so swollen from blood-poisoning that it was nearly necessary to amputate it. This was not because of neglect or bad treatment, but because she would not complain and wanted to go on. I could mention many other examples.

People with a well-cultivated muscle sense have a magnetism, a subtle something which distinguishes them from the awkward, slow-moving person without snap. This is a part of them, no matter what they are called on to do, and becomes also a part of their mental processes.

The reason that an athlete, to speak in professional parlance, never "comes back" (which means never regains, after a period of protracted inactivity, the same physical excellence) is more mental than physical. It is due, usually, to faulty methods of training, overfatigue in training and a lessening of nerve-resistance by dissipation or strain. Although his muscles may respond to every test that they did before, the excitement of his profession will wear on him and he will lack, at crucial moments, his former courage and ambition.

Exercise is a two-edged weapon, and while one appreciates the zeal of certain persons who start gymnasia in the slums, yet it must be realized that nothing is gained by enabling a lung to take in more foul air and that such places as cellars, work-shops, etc., are dangerous places to exercise in and not nearly so beneficial as the playgrounds and out-door games; and again, every one possesses individual peculiarities and should take only the exercise which is best suited to his case.

A lady told me that a physician whom she once consulted for obesity said, abruptly, "Cut out all starch and sugar and walk five miles a day." He made no examination of any kind, knew nothing of her heart or kidneys, her measurements, or her resistance; but treated the matter as trivial and unimportant, although she had been in bad health for a long time. I would not like to take such a chance as that, which might have been a most disastrous one.

However, before we teach the masses physical methods, etc., let us clean up our city, abolish the smoke nuisance, lessen working hours for the sick or feeble and give them places suitable to exercise in, and have medical supervision of aspirants for such treatments.

The boy scout idea is an excellent one. Drilling, marching, etc., are the best of exercises and teach coordination of mind and body, which, though possible at any age is, of course, easier to acquire the younger and more enthusiastic we are.

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THE RARITY OF TABETIC AND PARETIC CONDITIONS IN THE NEGRO

A CASE OF TABES IN A FULL-BLOOD NEGRESS

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It is a matter of belief among neurologists who have followed the question of nervous diseases among negroes that the so-called parasyphilitic conditions—tabes and paresis—do not occur in the full-blood African. My own experience in our hospital wards and clinics, where a good percentage of the material is drawn from the colored population, has convinced me of the great rarity of such conditions in the unmixed negro, but I have on two or three occasions seen unquestionably full-blood blacks suffering from tabes. Some accident has in each instance, however, until the present, militated against my getting the proper data for recording the observation. The prevalence of these diseases in the mulatto is undisputed, though they are much less frequent than in the white.

The rarity of parasyphilitic states in the Ethiopian is all the more notable when we contemplate the fact that negroes are practically without morals and that their promiscuous sexual practices occasion the great if not universal prevalence of syphilis among them. So thoroughly "syphilized" are negroes about large cities, that it is a matter of serious doubt whether any considerable percentage escape infection. The careless untutored way of the downright negro is the cause of his neglect of any protracted effort at treatment and it consequently may be questioned whether any black is ever efficiently treated except while confined in a hospital ward. If the assertion of syphilographers and neurologists that untreated syphilis is most prone to culminate in the primary degenerations of the nervous system, the immunity of negroes to such conditions is made still more remarkable. Again, alcohol is said to be one of the contributing factors in the development of tabes and paresis, but the negro is notoriously addicted to alcohol, his indulgence in this respect being for the most part limited only by his inability to get it regularly. Obviously then, the negro is protected from the distant nervous effects of syphilis by something native to his organism.

We may pass by with mere mention the fact that some hold that the elementary tracts in the brain and spinal cord of negroes are rather better organized and more resistive and stable, and that the neuromuscular mechanisms are crude and approach more nearly toward the deeply organized and instinctive aptitudes of the anthropoid.

Another and to me more significant observation, however, has often compelled my attention. Anyone who has seen a great many cases of tabes has perhaps noted that the subjects of this disease are for the most part drafted from a class of persons who work assiduously and get much friction out of their lives; who feel the brunt of care and responsibility greatly, and who depress themselves with the tedium of their work and with apprehensive misgivings as to the possibility of failure, etc.; together with many other of the worries which rather seem to be the lot of the highly civilized white man. I am convinced that such temperamental and nervous defects have their influence in lowering the powers of resistance and in determining the development of tabes and the primary degenerative changes in the nervous system.

Herein may rest a possible explanation of the rarity of the parasyphilitic diseases in the negro, for one of the salient traits of his character is his improvidence. We only need to be acquainted with the life habits of negroes in large settlements in this country to be convinced that they have not progressed very far from the primitive habits of their antecedents in the rude huts of a mid-African village. Thus, since his contact with the white race, the negro has become better "syphilized" than "civilized," having suffered the penalty of all inferior races when thrown into contact with the better-civilized white man—that of contracting the vices with their consequences more quickly than the virtues. But as pertains to our present argument, the negro is a degree better off, thanks to his primitive limitations, for he can still enjoy the childlike euphoria of a care-free life.

One other explanation of the great rarity of tabetic and paretic states in the negro race is that suggested by Dr. T. H. Weisenburg, who once remarked to me that he had noted that tabetics nearly always have blue or gray eyes and otherwise blond complexion. I have since made the same observation. Certainly this is remarkable in New Orleans and vicinity, where people of Latin descent (practically all brunettes) predominate in numbers. This observation is of some significance here as it suggests that constitutions associated with more or less intense pigmentation of the skin carry with them some degree of immunity against such diseases as tabes.

However, the purpose of the present writing is to cite a case of unquestioned tabes in an undoubtedly full-blood negro, with flat nose, thick lips and black skin. In my judgment there is absolutely no question about the patient being a Simon-pure negress.

In passing I beg to call attention to the early age at which this case of tabes has developed. It is rather obvious that the patient acquired syphilis between the ages of 14 and 17, and that this is consequently a case of acquired tabes, and not one of the so-called juvenile tabetics, in which the syphilis was hereditary and operated from the time of birth.

REPORT OF CASE

History.—Annie S., a colored woman, aged 27, was referred from Dr. Bruns' eye clinic at the Eye, Ear, Nose and Throat Hospital, with the ophthalmologic diagnosis of primary degeneration of both optic nerves, and request for neurologic examination and possible explanation of the optic nerve condition. Family history as far as could be obtained was negative. The patient had not had any illness whatever before the birth of her first child. The menses began at 12 and were seemingly normal. Patient bore a healthy child at the age of 13½ years. The child is living and well. A dead child was born 3½ years later. Two and a half years subsequent to this there was a spontaneous miscarriage. Patient insistently denied that she ever had any skin or throat symptoms. There had been no disease or injury in more recent years, aside from very severe intermittent headaches for the past five years, which had a tendency to be worse at night. Patient had drunk rather freely of alcohol and had been very derelict in her morals. For the past two years she had suffered severe lancinating pains, especially in the legs, and had experienced a sense of binding or constriction about the waist occasionally. A short while before the sight began to fail she on several occasions saw double. Since the month of May, 1910, the sight had failed steadily first on the left, subsequently on the right. At the time of examination the sight was greatly diminished. Numbness and tingling and other paresthetic disturbances had occurred frequently in the ulna distribution of the hands and forearms.

Physical Examination.—Deep reflexes were absent in the lower extremities; plantar reflexes were normal. There was very slight Romberg sign. Pupils were absolutely rigid to light. The left pupil was larger than the right and somewhat oval in outline. Both pupils reacted slightly to efforts at accommodation. There was decided dulling of sense of touch and delayed sense of pain on the anterior surfaces of the legs. The bowels were obstinately constipated. Sometimes the bladder was so irritated that the patient was compelled to rise often at night. Nothing further of note was observed in the physical examination. The patient had never experienced ataxic symptoms so far as she knew.

In regard to the absence of ataxic tendency and practically negative Romberg test, we must recall that in tabetic cases in which optic atrophy and blindness have occurred in the early stages of the disease, impairment of the muscle and joint sense and the ataxic consequences are very slight or not at all present.

1224 Maison Blanche.

Venereal Diseases and Stricture of the Rectum.—J. P. Tuttle says that gonorrhea and chancroid have been enlarged on by some authors as frequent causes of stricture of the rectum. Theoretically, if an ulceration from gonorrhea should involve the muscular coat, there is no more reason why a stricture should not follow than from any other ulceration. As to chancre, these cases apparently do not occur so frequently as in former years.—*Boston Medical and Surgical Journal.*

RESULTS IN THE TREATMENT OF THIRTY CASES OF OTITIS MEDIA BY VACCINE THERAPY

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In the past two or three years much has been written on the results obtained on various infections treated by vaccine therapy. The literature on the subject has proved conclusively that therapeutic immunization by bacterial vaccine is a successful plan of treatment in properly selected cases, but the reader not especially familiar with this form of treatment is at a loss to know just what a properly selected case is. It is, therefore, my purpose in this paper, not only to report the results I have obtained in my series of cases of otitis media, but to show in which cases results should be expected, and in which good results were occasionally produced, but were the exception rather than the rule. For this purpose I have divided my cases into two classes—subacute and chronic.

SUBACUTE CLASS

In this class I have included all cases of not more than three months' standing. It would be impracticable to detail each case of my series under this heading, so I shall give the history of a representative case.

CASE 1.—Baby D., aged 3, had otitis media in both ears for two months, following an attack of scarlet fever. The discharge was about the consistency of cream, dirty white in color, profuse, and with scarcely any change in quality or character since the beginning of the attack. The previous treatment consisted of washing the ear three times a day with warm boracic acid solution. A culture was taken on gelatin agar and the causative organism found to be *Staphylococcus albus*. A vaccine was prepared and the patient inoculated with 50,000,000 of the dead organisms. Four days later the discharge had decreased about 50 per cent. On the seventh day an injection of 100,000,000 staphylococci was given, followed the next day by a slight soreness at the site of injection and a slight decrease in the discharge. Five days after the second inoculation, the discharge had ceased completely. Two days later a third inoculation was given to prevent a recurrence. The child was treated a year and a half ago and there has since been no return.

I have had thirteen similar cases, most of which followed measles, pneumonia and scarlet fever, in all of which the patients recovered. Of the thirteen cases the *Staphylococcus albus* alone was the causative organism twelve times and the pneumococcus once. The youngest patient was a year and a half old, and the oldest 32. The disease in the latter followed an attack of influenza and was of one month's standing.

Autogenous vaccines were used in all the cases, principally because the virulence of the organism making up the vaccine approaches as closely as possible the virulence of the organism producing the otitis media. The difference in virulence rather than strain I think is responsible for the better results obtained by autogenous vaccines over stock vaccines. This is probably more easily explained by the following example: An acne pustule and a virulent furuncle are often caused by the same organism — a *Staphylococcus albus*. A vaccine made from the staphylococcus producing the acne would not be expected to do the patient with the virulent furuncle much good, whereas a vaccine made from the staphylococcus of the furuncle would be positive in its beneficial effect on the patient suffering with a furuncle. No class of cases respond more readily to bacterial therapy than do cases of subacute otitis media.

CHRONIC OTITIS MEDIA

It is, of course, understood that no definite period can be set to determine when the patient passes from the subacute to the chronic stage, but to be as definite as possible in my statements, I have classified all cases of three months' standing, or longer, as chronic. Under this classification I have seventeen cases, varying in duration from three months to thirty years. The prognosis, as a rule, is least favorable in cases of long standing, and best in cases of relatively short duration. Cases in which the discharge was slight and without much odor were uniformly benefited. In nine cases I found a short, actively motile bacillus, which grew readily on any media and was negative to Gram's stain. The cultures of this bacillus had a very foul odor, similar to the odor of the discharge from the ears. The cases in which this organism was present showed little or no improvement after a course of seven or eight inoculations. In cases in which the staphylococcus, streptococcus or pneumococcus were the causative organisms, either alone or combined, the patients were markedly improved or entirely cured. Cases in which the staphylococcus and *Bacillus pyocyaneus* were present improved more slowly than those with the staphylococcus alone. The following case, however, which I cited in a previous paper, is a striking exception to the rule:

CASE 2.—The patient, Mrs. W., aged 30, was referred to me for therapeutic immunization for otitis media. Her ear had discharged almost continuously since she was six months old. Three years ago she submitted to a radical mastoid operation. Her recovery was prompt and the discharge stopped for six weeks—the longest absence of discharge in her *lifetime*. At the end of the seventh week the discharge began anew, and after two years' subsequent treatment by an otologist she was referred to me for vaccine treatment.

A smear from the discharge showed a staphylococcus and a *Bacillus pyocyaneus*. A vaccine of the corresponding organisms was made and the patient inoculated with 200,000,000 staphylococci and 300,000,000 *Bacillus pyocyaneus*. After four inoculations the discharge stopped completely. After the fifth inoculation it started again, and after the seventh inoculation it disappeared. Three more inoculations were given without its return. Two years have passed since the last inoculation and the discharge has remained absent.

In the literature I have found five or six cases with a similar history and result. This, however, is a relatively small proportion considering the number of patients treated. The causes responsible for the rapid cure and the numerous failures in similar cases remain to be explained. Two years ago a lady suffering with a double otitis media of eight years' standing was referred to me for vaccine treatment. The discharge was of a watery consistency, moderate in amount, and occasionally had some odor. Her treatment up to this period consisted principally of keeping her ears clean by means of warm boracic acid solution. A smear made at the time she presented herself showed a pneumococcus as the causative organism. Fortunately the organism grew very readily and a vaccine was prepared. After three inoculations the discharge ceased completely and the patient was discharged. One month later she returned with both ears discharging slightly. A smear at this time showed *Staphylococcus albus*. After two inoculations of this organism the discharge again stopped, only to recur two months later. After four subsequent inoculations of a staphylococcus vaccine, the discharge again ceased.

This process of disappearance and recurrence has continued at about the same intervals up to the present time. As long as she was inoculated at regular intervals, the discharge remained absent, but from four to six weeks after inoculations were discontinued a recurrence was sure to come. This represents that class of chronic otitis media which is only benefited by vaccine treatment. It is not an uncommon experience to encounter cases under this class in which the discharge diminishes about 50 per cent. under a course of inoculations, but at no time disappears entirely. Of the seventeen patients with chronic otitis media treated by vaccine therapy, three recovered completely, five were improved, and nine showed no improvement at all.

In this class of cases vaccine therapy should be tried when the ordinary measures fail. Its use should be considered as a means capable of producing some measure of good in about 50 per cent. of cases, with an occasional remarkable result.

CONCLUSIONS

In conclusion, I feel safe in saying that in subacute otitis media no other means of treatment is capable of producing such uniformly good results as vaccines. Their early use would greatly diminish the large number of chronic cases, so common to every physician, and so annoying to the individual.

The results in chronic cases, on the other hand, are so variable, that its use as a routine should not be advised. It should be tried, however, when other measures have failed.

VANADIUMISM

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Vanadium is a metal named by Sefström, in 1830, in honor of the northern goddess Vanadis (the German Freya). The metal is of no importance technically, although various forms of it are valuable. The pentoxid is used in photography as a developer. Vanadium chlorid and trioxid are used as mordant in printing fabrics; the trioxid is used also in the manufacture of steel, in making easily malleable and ductile alloys. Vanadium pentoxid has been used in diseases due to defective metabolism; there is not, however, enough clinical evidence to justify its use as a medicine.

Vanadiumism is a chronic intoxication caused by ingestion or absorption of some forms of vanadium, either industrially, medicinally, or accidentally. The principal lesions are found in the lungs, kidneys, and gastro-intestinal tract. The lungs are highly congested and show a marked destruction of alveolar epithelium. The kidneys reveal congestion due to continuous irritation and, at times, acute hemorrhagic nephritis. The gastro-intestinal tract shows evidence of irritation and inflammation.

Persons employed in establishments where the various kinds of vanadium are produced, and more especially vanadium trioxid, suffer from chronic poisoning. For example, laborers in reduction plants, who are exposed to the dust and fumes, are most susceptible on account of their occupation. The medicinal use of small doses of the pentoxid will frequently cause poisoning. Accidental poisoning may come from using or wearing clothing dyed by vanadium chlorid, trioxid, or pentoxid.

Anemia is an early symptom (a peculiar cachexia), not altogether unlike chlorosis. There is, at first, marked increase in the number of corpuscles and hemoglobin, which is shortly followed by reduction of cells and hemoglobin. At times, there is disintegration of the red cells. The cough is a prominent and characteristic symptom. It is dry, irritating, and paroxysmal, becoming so intense that hemorrhages are frequent and severe, even causing death. The workers in the manufacture of the various products of vanadium are very susceptible to tuberculosis and, unless removed from the labor, rapidly succumb to the disease. Emaciation, irritation of the nose, eyes, and throat are always in evidence. Anorexia, nausea and diarrhea (often absent), followed by obstinate constipation, indicate gastro-intestinal involvement. Albumin, casts and blood, are often present in the urine.

Continuous exposure to the poison leads to fine tremors of the extremities, headache, neuroretinitis, amaurosis, vertigo, hysteria, and melancholia. The drug is eliminated by the kidneys; it may be found also in the feces, sputum, and saliva. Dr. Omar T. Cruikshank, in his experiments on animals, has been able to observe the toxic effects which coincide with those found in man.

The diagnosis is not difficult when the history of exposure to the various forms of vanadium is at hand. Accidental origin is often obscure and diagnosis is not, at once, determined.

Watts gives the test for vanadium in the following:

> All vanadium compounds heated with borax or phosphorus salt in the outer blowpipe flame produce a clear bead, which is colorless if quantity of vanadium is small, yellow when it is large: in the inner flame the bead acquires a beautiful green color.
>
> Vanadic and chromic acids are the only acids whose solutions are red; they are distinguished from one another by the vanadic acid becoming blue and the chromic acid green by deoxidation.
>
> When a solution of vanadic acid, or acidulated solution of an alkaline vanadate, is shaken up with ether containing hydrogen dioxid, the aqueous solution acquires a red color like that of ferric acetate, while the ether remains colorless. This reaction will serve to detect the presence of one part of vanadic acid in 40,000 parts of liquid.

In the absence of grave renal, blood, nervous, and lung involvement, the prognosis is good. Where there is active inflammation of the kidneys and lungs the prognosis is unfavorable, but depends greatly on the extent of the lesions. Fatal terminations frequently ensue, as a result of continuous exposure to the poison.

The prevention of vanadiumism is difficult in vanadium works, owing to the carelessness of employees and employers. Means to allay and carry off the dust and fumes should be employed constantly. Perfect ventilation and the use of respirators are imperative. The nasal and oral cavities should be thoroughly cleansed with some efficient alkaline spray, such as the ordinary Dobell solution, followed by a mentholated oil spray. The stomach should be washed out, and later the intestines freely evacuated with a saline laxative. The cough may be allayed by giving terpin hydrate ¼ gr., heroin ⅛ gr., and creosote ½ minim, every two hours with counter-irritations of iodin or mustard applications over the chest. The inhalation of stimulating vapors is salutary. Iron, calisaya, and strychnin will meet the needs of anemic, nervous and debilitated conditions. Cod-liver oil may be given with advantage. Active outdoor exercises are essential. Turkish, Russian or cabinet baths may be given to aid elimination.

401 Fourth Avenue.

TWO CASES OF APPENDIX ABSCESS DRAINED BY RECTAL PUNCTURE

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The advantages of vaginal drainage for certain cases of pelvic abscess in women have long been recognized. The equal advantages of rectal drainage for the rarer condition of pelvic abscess in the male, have been less widely accepted. It has not been, however, an uncommon practice in the past to drain, in this way, residual pelvic abscesses occurring in men after abdominal operations for suppurative appendicitis. Nature was allowed formerly to effect an uncertain and occasional cure of appendiceal abscess by the same route, and occasionally the efforts on the part of Nature in this direction have been supplemented by the surgeon.

With improvement in the diagnosis and operative treatment of acute appendicitis, there is less and less occasion for resort to this method of drainage, either by the surgeon, or on the part of Nature. Yet there unfortunately exists a very restricted class of cases in which this simple, safe, and valuable procedure is indicated, and McLaren[1] has recently called attention to the subject in an article in which he reports fifteen cases of appendiceal pelvic abscess drained by rectum, with very satisfactory results. In one case rectal puncture alone sufficed to bring about a cure; in all the other cases it was combined with the abdominal operation, either before or afterward. He advocates rectal puncture and drainage of collections of pus in the rectovesical pouch as a preliminary measure, to be followed immediately by opening the abdomen above and dealing with the pathologic conditions found according to general surgical rules.

In suppurating appendicitis, removal of the primary focus is such a well-recognized desideratum as to call for an abdominal incision in the vast majority of cases, through which at the same time collections of infected fluid or of pus, either in the iliac fossa, or in the pelvis, can be so satisfactorily and adequately drained that routine preliminary drainage by the rectum will not appeal, I imagine, to the majority of surgeons, nor does it to me. But that there are certain definite, though narrow, indications for the procedure must be admitted by all familiar with large general surgical clinics.

Unfortunately all cases of acute appendicitis are neither diagnosed nor operated on in the early stages. A certain small number of patients first reach the surgeon profoundly septic and exhausted, with large abscesses well developed. In a case of this kind in which the abscess cake is palpable in the median line above the pubes, fills the pelvis, and bulges into the rectum, especially if it can be felt bimanually as a single fluctuating mass, the indications are clear for rectal puncture, which offers a rapid, simple, and safe method of drainge. Such patients must, however, be watched closely afterward: if the improvement in symptoms is not immediate and continuous it may be necessary to go in above, for it must be remembered that the cause of the lesion has not been removed, and that the original suppuration about the appendix may remain undrained, the pelvic abscess representing merely the overflow from the first. The difficulty of determining this point is the one great drawback to the employment of the method, and it should not be relied on exclusively when there is a mass in the iliac fossa, as well as a pelvic abscess. The method is ideal only for large pelvic abscesses when the appendix is itself pelvic in position, and this can be determined only with approximate accuracy by the position of the mass.

The technic is simple. It is a wise precaution, as pointed out by McLaren, to introduce a stiff catheter into the bladder for the purpose of emptying that viscus, and marking its position, so that injury to it may be avoided. I did not do this in either of my cases. Having dilated the sphincter, either with or without the use of a speculum, the anterior bulging wall of the rectum should be incised in the median line with curved blunt scissors, and the scissors advanced until pus is reached. A T-tube of soft rubber is then introduced and brought out through the anus. The whole procedure takes about three minutes. The convalescence, in my experience, has been uneventful and rapid. The following two cases are reported as illustrative of the value of the procedure:

Case 1.—*History.*—G. A. A., No. 171,379. E. S., male, aged 18, entered the Massachusetts General Hospital on the service of Dr. Brooks, Aug. 13, 1910. One year ago the patient was in Rutland Sanatorium for tuberculosis of the lungs; discharged with disease arrested after several months; no previous attacks of appendicitis.

Present Illness.—Two weeks prior to admission the patient ate apples, pineapples and cherries in large quantities. Next day he had severe abdominal pain with vomiting; took salts and castor oil. Bowels did not move for three days. Since then he had been in bed with diarrhea and occasional vomiting. The stools had lately been nearly clear mucus, which discharged involuntarily. Abdominal pain, cramp-like in character, was present. There were no urinary symptoms.

Physical Examination.—The patient was a thin, poorly nourished and developed boy; tongue dry and coated; sordes on teeth; lungs negative, except for dulness and bronchial breathing at right apex; upper part of abdomen soft and flat; below umbilicus full and rounded, and dull on percussion. Catheterization removed about 8 ounces of high-colored urine, leaving the abdominal mass unchanged. There was tenderness and muscular spasm of moderate degree in the left lower quadrant; practically none in the right. Rectal examination: The rectum was empty; into front wall bulged an irregular, soft, fluctuating mass which was moderately tender. Temperature was 102 F.; pulse 120; white count 32,000; respirations 30.

Operation.—Lithotomy position. Sphincter dilated. Bulging mass opened with scissors and a large amount of foul pus evacuated. A portion of a gangrenous appendix came away with the pus. On account of free bleeding from the abscess cavity it was packed with gauze, the end of which came out through the anus. The patient made a good recovery from the operation. There was a profuse discharge of pus from the rectum; the wick was removed in twenty-four hours. The temperature shot up to 102 F. at the end of a week; a finger was inserted into the wound, but no pocketing of pus found; temperature came down at once. August 29 the patient was discharged to convalescent home in fair condition, with still slight tenderness and induration by rectum. The temperature was normal.

Subsequent History.—Jan. 24, 1911, the patient personally reported for examination. He had had no symptoms of any kind since leaving the hospital; felt and looked well; abdominal examination negative; by rectum a painless scar could be felt, with a well-marked transverse ridge above it; no stricture, no induration.

Case 2.—*History.*—G. L., No. 171,969. E. S., male, aged 17, entered Massachusetts General Hospital on the service of Dr.

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[1] McLaren, Archibald: The Proper Treatment of Intraperitoneal Abscess in the Lower Abdomen, with Special Reference to Rectal Drainage in Pelvic Abscess, The Journal A. M. A., June 25, 1910, p. 2105.

Brooks, Sept. 15, 1910. He was born in Italy and came to this country Aug. 1, 1910. One week after arrival he began to have slight pains in the right lower quadrant; three weeks prior to admission the pains became worse; the patient lost appetite, and began to run down in health; one week later he had severe pain, with vomiting. Following that the patient felt poorly but without acute pain until September 14, when it became severe again, with vomiting; bowels moved daily; no urinary symptoms; had several chills.

Physical Examination.—The patient was a well-developed boy; temperature 99 F., pulse 116, respirations 34, white count 10,000; lay with knees flexed; tongue heavily coated; abdomen distended and tender in lower portion; large mass palpable, extending from level of umbilicus on the right, across median line to the crest of ilium on the left. Rectal examination was very painful. It revealed a tense, fluctuating mass, continuous with the abdominal mass, bulging into the anterior wall of the rectum.

Operation.—Sphincter dilated, anterior wall of rectum incised with knife, pus reached, opening dilated with half lengths and about one pint of pus evacuated; some bleeding: T-tube inserted. Patient sent to ward in good condition.

Convalescence.—The patient pulled out the tube within an hour. Shortly afterward he got out of bed and emptied about 10 ounces of pus and blood out of his rectum onto the floor. The tube was omitted after this. A small amount of pus discharged daily from the rectum. The abdominal mass gradually subsided; the temperature reached normal on the fifth day. The rectal wound was explored with the finger every two or three days. Enemas were used as needed. The patient made steady progress and was discharged in excellent condition September 29, the fourteenth day.

Subsequent History.—Letter of Jan. 14, 1911, stated that the patient was well and had been so since the operation. He did not report for examination.

213 Beacon Street.

X-RAY LOCALIZATION BY CONSTRUCTION

A MODIFICATION OF THE MC KENZIE-DAVIDSON METHOD

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In this method of localization two exposures are made on the same plate. McKenzie-Davidson's description[1] of this portion of the technic is as follows:

> Two wires at right angles to each other are placed on the photographic plate, film, or paper. The Crookes tube is then placed with its anode at a measured distance from the plate and exactly perpendicular to where the wires cross. The tube is fixed in a holder which slides in one plane. Further, one of the cross-wires must be in exactly the same plane as that in which the tube is to be displaced. The wires being painted over with some pigment, the part to be photographed is placed on the plate and carries with it the mark of the cross wires. The tube is then displaced to a measured distance to one side of the perpendicular, and an exposure given, then to a corresponding point on the other side of the perpendicular, and another similar exposure given. The resulting negative shows double images from the two different points of view. A further precaution is necessary, viz., to mark one quadrant of the plate and the corresponding quadrant on the patient's skin.

The plate is developed, fixed, and dried. It is then placed on an illuminating box, the film side next to the operator.

Figure 1 is a drawing made from a plate exposed according to McKenzie-Davidson's technic, showing the localization shadows of a needle suspended in a pasteboard box. The location of the needle is to be ascertained. In this drawing are seen the construction lines of the horizontal projection, which is drawn directly on the film side of the plate. The plate was exposed at 18 inches distance from the anodal point (point of luminosity on the target) of the tube which was displaced laterally 3 inches on each side of the perpendicular.

The lines *AB* and *ab* represent the shadows of the needle. On the horizontal are marked points *C* and *D*, 3 inches on each side of the perpendicular cross-line, indicating the position of the tube during the two exposures. From *C* and *D*, lines *CA* and *Da* are drawn, connecting *C* and *D* with identical points in the two shadows. These two lines intersect at a point *X*. The quadrant in which *X* falls is noted and the perpendicular distances of *X* from the two cross-lines bounding the quadrant are measured and found to be $1^{9}/_{16}$ inch and $1^{11}/_{16}$ inch, respectively. Similarly, the point *Y* is found by drawing the lines *CB* and *Db*, and its distances from the two cross-lines determined. These measurements are, 2⅜ inches and 2 inches. By connecting *X* and *Y* the line *XY* gives a horizontal view of the needle. By applying these localizing measurements for *X* and *Y* to the corresponding quadrant on the pasteboard box, the horizontal locations of *X* and *Y* are found.

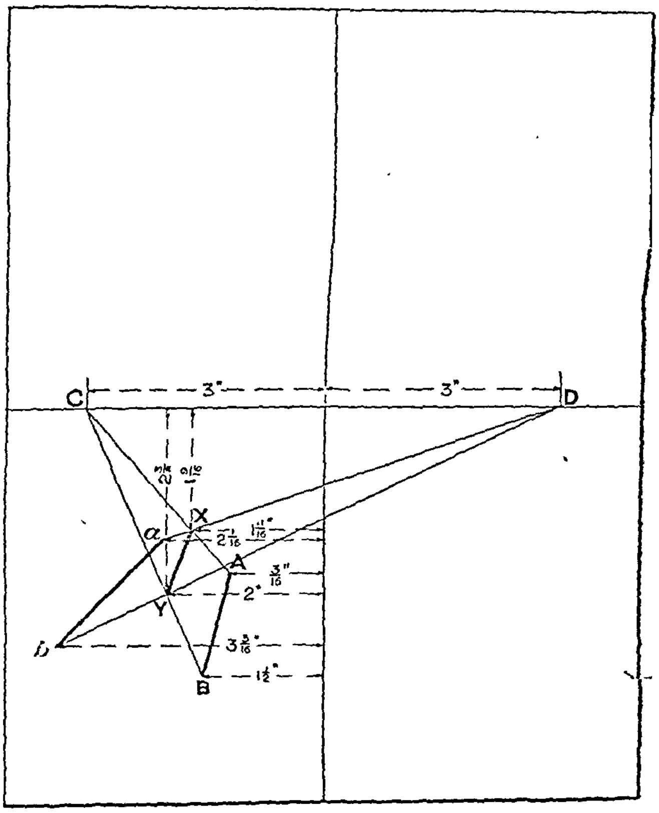

FIG.
HORIZONTAL PROJECTION

To determine the distance of the needle from the plate at the time of exposure (which practically coincides with depth) a vertical projection is made. Figure 2 shows this projection. On a sheet of paper a long straight line is drawn. Two points are marked on this line, *G* and *H*, 18 inches apart. This represents the distance of the plate from the anodal point of the tube at the time of exposure. Through *G* and *H* two perpendicular lines are erected, *EF* and *bH*, the former representing the plane of the tube displacement, the latter the plane of the plate. Points *E* and *F* on line *EF* are each 3 inches distant from *G*, and represent the lateral displacement of the tube from the perpendicular.

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[1] Davidson, J. M., and Hedley, W. S.: A Method of Precise Localization and Measurement by Means of Roentgen Rays, Lancet, London, Oct. 16, 1907, p. 1001. Williams: Roentgen Rays in Medicine and Surgery.

On the line *bH*, two points, *A* and *a*, are marked $1^{3}/_{16}$ inch and $2^{1}/_{16}$ inches, respectively, the distances of *A* and *a* from the perpendicular cross-line on the plate as determined by actual measurement thereon (see Figure 1). The lines *AE* and *aF* are drawn intersecting at point *X*, which is found to be $2\frac{1}{8}$ inches from line *bH*. This is the exact distance of point *Aa* of the needle from the plate at the time of exposure. Similarly, point *Y* is found by marking on line *bH* points *B* and *b*, $1\frac{1}{2}$ inch and $3^{5}/_{16}$ inches, respectively, from *H*, the distances of *B* and *b*, respectively, from the perpendicular cross-line on the plate (see Figure 1), and drawing the lines *BE* and *bF*. *Y* is $4^{5}/_{16}$ inches from the line *bH*. By connecting *X* and *Y* the line *XY* gives a vertical view of the needle.

By these measurements of depth in conjunction with those of horizontal position heretofore obtained, the location of the needle is determined.

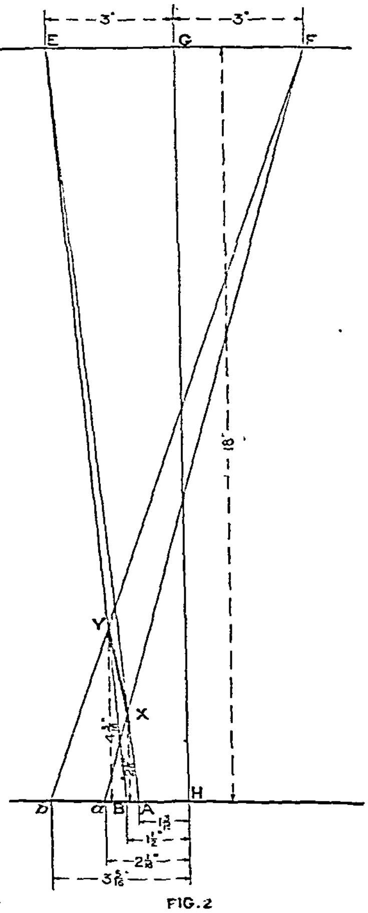

FIG. 2
VERTICAL PROJECTION

Certain points are to be emphasized in this method. In the horizontal projection the quadrant in which the points of intersection of construction lines fall is to be noted, and the perpendicular distances of these points from the bounding cross-lines obtained. In the vertical projection, when localization shadows of the same point fall in different quadrants, care must be taken to transfer the measurements to the proper side of the perpendicular, either right or left, as indicated on the plate. In drawing the projection lines in both projections, in order to connect the points marking the positions of the tube with their corresponding shadow points, these lines must intersect. It is to be noted that the horizontal projection is drawn directly on the film side of the plate. This insures simplicity and accuracy in technic, but it can be made on paper similar to the vertical projection.

By geometrical construction such as has been described, no special apparatus is required, and for this reason the method is particularly available for those radiographers who have not provided themselves with a localizing apparatus. It is to be noted that no special knowledge of mathematics is required in this solution of the localization problem as the various projection lines can be drawn by a rule of thumb. Again, by localizing several points on a foreign body and connecting them by lines, actual size, vertical and horizontal views of the body are obtained and permanently recorded in a drawing, a feature of distinctive value to the operator.

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THE SUCCESSFUL TREATMENT OF A CASE OF ILLUMINATING GAS POISONING*

WILLIAM RAVINE, M.D.
CINCINNATI

In looking through the literature and statistics on illuminating gas poisoning one is struck by the meagerness of the reports and by the variety of nomenclature used in describing cases. One finds, for instance, descriptions under the titles "Asphyxia," "Coal Gas Poisoning," "Carbon Monoxid Poisoning," "Poisoning by Noxious or Irrespirable Gases." In the several instances the cases have been the result of blowing out of gas lights, either because of ignorance or with suicidal intent; carelessness in heaping clothes on gas fixtures in such a way as to turn the cocks; leaking of gas fixtures; badly constructed or worn-out stoves and fixtures; or, as in my case, the overturning of a gas heater by an individual alcoholically stimulated to the point of carelessness.

During years 1900-1910, there were ten cases of illuminating gas poisoning at the City Hospital with six deaths.

Illuminating gas contains:

	Per cent.
Carbon monoxid	12 to 28
Carbon dioxid	0.3
Hydrogen	30.35
Marsh gas	21.45
Nitrogen	6

The carbon monoxid in this mixture of gases is the cause of the symptom-complex. Carbon monoxid has 200 times greater affinity for hemoglobin than oxygen, and, therefore, the life of an individual can continue only so long as the hemoglobin is able to attach enough oxygen to itself to maintain the process of oxidation essential to life.

SYMPTOMS

Carbon monoxid gas has no influence whatever when applied directly to nerve and muscle;[1] when it acts through the blood, however, phenomena appear which are indicative of primary stimulation, but which cause, secondarily, paralysis of the nervous system. Thus there occur at first severe headache, great restlessness, excitement and increased cardiac and respiratory activity, salivation, tremor, twitching and spasm, followed by mental confusion, exhaustion, drowsiness and paralysis and loss of consciousness, labored stertorous breathing and finally complete loss of sensibility, and death.

Thompson,[2] in a series of ninety cases, reports a leukocytosis in eighty cases, which he thinks is due to some specific action of the gas, and which is similar in its cause to the leukocytosis that occurs in ptomaine poisoning.

In all the cases reported in the literature there was in the early stages a subnormal temperature. The maximum temperature is usually attained on the first day. The highest temperature reported is by Steele.[3] The patient was a girl of eight years, who, when first seen, was in a state of coma. The temperature began to rise rapidly and within eight hours had reached 110 F., accompanied by a pulse rated at 215 per minute. In this case there was a complete recovery in six days following the use of cold sponges and inhalations of oxygen. In all the cases reported the pulse has been accelerated and the rhythm of the pulse has been regular during the coma.

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* Read before the Medical Research Society, Cincinnati, March 2, 1911, at the suggestion of Professor Forchheimer, to whose courtesy I am indebted for the permission to report the case.

[1] Landois: Text-Book of Human Physiology, Ed. 10, 1905, p. 58.

[2] Thompson, W. G.: Tr. Assn. Am. Phys., 1902.

[3] Steele: Philadelphia Med. Jour., Feb. 16, 1901.

Physical examination of the lungs, as a rule, shows no abnormalities except in fatal cases, and in these the findings indicate a terminal edema. The urine shows no special characteristics. In a few cases there was a transient albuminuria. The pupils varied, being at times dilated, at times contracted. The symptoms on the part of the nervous system have been tremors, muscular twitchings, convulsions, rigidity, opisthotonos, anesthesia and headache. Evidence of vasomotor paralysis is found in burning sensations in the skin, especially over the face, and in the redness of the cutaneous surfaces. The lips and extremities appear bluish and cyanotic, owing to the peculiar cherry-red color that is a characteristic of carbon monoxid, but which does not obscure it. Coma, which is profound, is always accompanied by stertorous breathing.

Brunneaux[4] has reported a case of hemiplegia following gas poisoning; Finkelstein,[5] one of dementia; Scott,[6] acute mania with recovery after ten days; Bruns,[7] disseminated encephalomyelitis. Alexander Pauski[8] reported the case of a patient ill for months with paralysis of legs and arms, sensory and speech disturbances, amnesia and mental weakness. Becker[9] reported a case of multiple sclerosis. Bontecon[10] described the postmortem findings in three cases. His histories related that the faces were pale, that the expression was placid, the eyes closed, the pupils neither contracted nor dilated and the conjunctivæ clear. The muscles on section were, as a rule, red. The lungs were cherry red in color and on section showed a moderate edema. There was no unnatural amount of blood found in the pleura or pericardium. The heart was empty and the blood-vessels contained fluid blood. The left ventricle of the heart was contracted, the right ventricle and auricle as a rule were dilated. The viscera were all of a pinkish color. In the case of Broadbent,[11] there was a report of softening of the lenticular nucleus and the posterior part of the internal capsule.

DIAGNOSIS

The diagnosis of illuminating gas poisoning is based on the history of the case and on the presence of coma with stertorous breathing, cherry-red color of the face and hands and the spectroscopic analysis of the blood which demonstrates the presence of carbon monoxid hemoglobin. Carbon monoxid hemoglobin is cherry red in color and causes the appearance in the spectrum of two absorption bands between D and F not unlike the oxyhemoglobin bands. The further means of recognition is the sodium test. A 10 per cent. solution of sodium hydroxid, when added to carbon monoxid hemoglobin and heated, gives rise to a cinnabar red color. This same test applied to oxyhemoglobin produces a brownish-black mass.

TREATMENT

The earliest reported treatment for illuminating gas poisoning is that of Struthers,[12] who advised jugular venesection, on the basis of his experimental work on animals. Corssland recommends the hypodermic use of 15 mm. of a 10 per cent. solution of nitroglycerin injected into the epigastrium. Other writers have advis electric stimulation, oxygen inhalations, cardiac toni and venesection, with transfusion of defibrinated bloo or normal saline solution. One author in his treatme of a case did a venesection and gave an enema of 2 ounces of salt solution. Heinicke,[13] in a report twenty-five cases of coal-gas poisoning, was the first t describe intravenous injection of salt solution.

CASE REPORT

Jan. 19, 1911, at 12:45 p. m., an unknown white man (Ca No. 161,349) was admitted on the East Medical Service the City Hospital with the following history:

History.—The inmates of a house at 223 George Street we alarmed by an odor of gas, and on investigation they foun that it emanated from a room on the third floor, which ha been engaged the night before by two men. On breaking ope the door they found the two men lying on the floor, a sma gas heating-stove overturned, and the gas escaping from th attachment on the wall. The men were hastily brought t the hospital by the police ambulance. One man was dead; th other was in a state of coma. The latter was a white ma aged about 40.

Examination.—The patient's face was symmetrical, some what reddened and the skin about the lower lids blue. Th lips were blue and covered with a white, frothy mucus. The pupils were dilated and did not respond to light. The breat was fetid. There was no odor of alcohol. There was ster torous breathing; no marks of violence either about head o the body. The skin over the entire body was dry and cold, and the finger tips were blue. The pulse was strong and rapid —130 beats to the minute. The rectal temperature was 97 F. There were no convulsions. Examination of heart and lungs revealed nothing of note. Extremities were relaxed. There was no Babinski sign or ankle-clonus. The patient did not respond to any form of external stimulation. Six hundred c.c. of a dark amber-colored urine were removed by catheterization. The specific gravity was 1.025 and the reaction was acid. No albumin, sugar or casts were present.

Treatment.—The patient was well covered with blankets and surrounded by hot-water bottles, and was given 1/30 gr. of strychnin hypodermically. The median basilic vein of the right arm was opened and 300 c.c. of blood allowed to flow, after which an intravenous transfusion of 1,200 c.c. of a 0.7 normal saline solution was given. Inhalations of oxygen were also given. Three hours later the face was somewhat reddened and the patient was perspiring, but was still comatose. Temperature was 100, pulse 136, respiration 32; caffein sodium benzoate, gr. ii, given hypodermically every four hours. After another three hours, the patient responded somewhat to external stimulation, but was still comatose. Temperature was 101, pulse 120, respiration 36. At the end of another three hours the condition was about the same; temperature 101, pulse 128, respiration 32. On the second day after entering the house the face and hands of the patient had assumed a distinct cherry hue. The man was drowsy, responded very slowly to questions, after answering which he immediately sank into sleep. The examination of the blood showed reds 4,500,000, whites 13,000, hemoglobin 80 per cent. The treatment consisted of the administration of strychnin, 1/30 gr., and caffein sodium benzoate, 2 gr., given hypodermically every four hours. The urine at this time was light amber in color. It was acid in reaction, with a specific gravity of 1.015. There was a slight amount of albumin present, but no sugar or casts. Nourishment consisted of 6 ounces of milk and 12 ounces of water.

Outcome.—On the third day consciousness returned. The man had no recollection of the past two days. He complained of a slight headache and dizziness. His face had a peculiar pinkish color, but the color of the hands was normal. At 6 a. m., his temperature was 99.3, pulse 88, respiration 24;

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[4] *Brunneaux*: Thèse de Paris, 1893.
[5] Finkelstein: Lancet, London, 1891, ii, 3778.
[6] Scott, A.: Encycl. Jahrb. d. ges. Heilk., 1896, vi.
[7] Bruns: Neurol. Centralbl., 1902, No. 6, p. 242.
[8] Pauski, Alex.: Neurol. Centralbl., 1902, No. 6, p. 242.
[9] Becker: Deutsch. med. Wchnschr., 1893, xix, 571.
[10] Bontecon: Med. News, Troy, N. Y., 1887.
[11] Broadbent: St. Mary's Hosp. Rep., London, 1893.
[12] Struthers: Edinburgh Med. Jour., 1855-6.

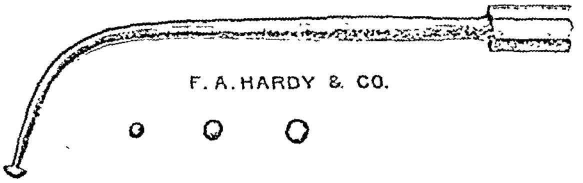
[13] Heinicke: Deutsch. Chir., 1885, Part 18.

at 6 p. m., his temperature was 99.1, pulse 72, respiration 28. On the fourth day his general appearance was good. He complained of no discomfort and was taking liquid nourishment. All medication had been discontinued. The urine was dark amber in color, was acid in reaction, had a specific gravity of 1.025, and showed no albumin, sugar or casts. At 6 a. m., temperature was 98.1, pulse 84, respiration 20; at 6 p. m., temperature was 98.2, pulse 80, respiration 22. From this day on convalescence continued uneventful. The man was discharged well on the seventh day. At the time of discharge the blood examination showed 5,000,000 red cells, 10,000 whites and 90 per cent. hemoglobin.

FRONTAL SINUS CURETTE

BEELER HIGBEE, M.D.
LOUISVILLE, KY.

In cases of empyema of the frontal sinus in which the removal of the middle turbinate and ethmoid cells fail to give sufficient drainage to relieve the condition, it is often necessary to enlarge the opening into this sinus. For this operation I have had made a curette, which I have used with success in a great many cases, the exact sizes and curve of which are shown in the accompanying illustration. This instrument is made to use only after the middle turbinate and ethmoid cells have been removed. After this has been done, the curette of the smallest size is placed in the normal opening of the frontal sinus and carried well up. The curette is then pulled downward, forward and laterally, thus avoiding any serious trouble.



Frontal sinus curette.

1259 Bassett Avenue.

TRANSILLUMINATION OF THE MASTOID PROCESS AS AN AID TO DIAGNOSIS *

EMIL AMBERG, M.D.
DETROIT, MICH.

H. McA., aged 21, was admitted to Harper Hospital March 9, 1911. At 12 p. m. his temperature was 101.8 F., pulse 100, respiration 22. At 4 p. m. the temperature was 102.8 F., pulse 80. The patient complained of pain in the right ear. The temperature kept up until March 14, mostly about 99 and 100 F., with a tendency to diminish somewhat until March 20. It reached 100 F. at 4 p. m. on the 15th; 99.2 at 4 p. m. on the 16th; 100 at 4 p. m. on the 17th; 98.8 at 4 p. m. on the 18th; 99.2 at 4 p. m. on the 19th; 99 at 4 p. m. on the 20th. The ear discharged very freely; nevertheless, I thought it wise to perform a paracentesis. There was little tenderness over the mastoid antrum and over the anterior part of the tip, but some on the posterior portion of the mastoid and in the muscles of that region. The patient presented a somewhat septic appearance and complained off and on of pain.

The urine was normal. The blood-count March 9 showed a moderate leukocytosis: on March 12 a decrease of the leukocytosis.

On March 20 I transillumined the mastoid process according to the method of Gustav Dintenfass and found a distinct increase of the shadow on the right side. The patient's parents, who had been sent for on account of the probable operation, decided, against the urgent advice of the attending physician and myself, to remove him from the hospital. The father declared that he would shoulder all responsibility, even if the patient should die.

I learned that the patient was operated on at another hospital April 3; that the large mastoid was found to contain a mass of pus and granulations and that the dura was found exposed.

This case is reported in order to show that the transillumination, according to Dintenfass, was a great aid in our diagnosis. There exist two ways of transilluminating the mastoid process: first, illumination from without, the method of Victor Urbantschitsch; and second, illumination from within, the method of Dintenfass. Urbantschitsch places the source of light on the mastoid process, excludes light from the canal by a specially large ear speculum, and looks at the drum-membrane. The power of light necessary to make the drum-membrane visible allows conclusions as to the intensity of the pathologic process in the bone. Urbantschitsch, in his text-book, claims that his transillumination only makes us acquainted with a larger accumulation of secretion, or a more extended change of the pneumaticity of the mastoid cells, but that it does not make us acquainted with other suppurative processes which do not lead to an extended filling of the pneumatic cells. Dintenfass claims, among other things, for his method,[1] that in general a pneumatic bone allows much light to pass; that a sclerotic or ebonized bone does so to a considerably less extent; that fluid (pus), granulations and cholesteatoma do not let the light penetrate at all. Either the tip or the antrum portion is not penetrable for the light, or the whole mastoid process is much darker than that of the healthy side, or totally black. Dintenfass claims, as the essential part of his method, that the two mastoids should be illuminated simultaneously in order to draw a conclusion. In my examination I did not find this necessary. While I intended to transilluminate both sides simultaneously, I could not carry out my purpose, because one of the lamps did not light as strongly as the other; so I compared both sides, with satisfactory result. The character of the two mastoid processes is considered to be the same.

The lamps Dintenfass uses are 2 cm. long, 1.5 cm. wide, cylindrical, with a rounded tip, and are gently introduced equally far into the external auditory canals until, according to Dintenfass, only the cable winding is visible. Dintenfass asserts that the region of the mastoid process presents a reddish tint when transillumined, in the shape of a slice of orange. It is the strongest at the place of attachment of the auricle and decreases gradually backward. Dintenfass also asserts that his method of transillumination aids in diagnosis, and that it always gives interesting disclosures about the mastoid process, but admits that by itself it can only rarely be of importance.

I may add that in my case the claim of Dintenfass is verified. In considering the x-ray examination of the mastoid in relation to transillumination, it is my personal opinion that the transillumination might be tried first. The x-ray examination may give a more detailed picture, and thereby may give us also an idea of the location of the lateral sinus.

270 Woodward Avenue.

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* Read before the Surgical Section of the Wayne County Medical Society, April 10, 1911.

[1] Arch. Otol. (German), lxxxiii, parts 1 and 2, p. 125.

TECHNIC FOR HYPODERMIC INJECTIONS

FRANK THOMAS WOODBURY, M.D.
Major, Medical Corps, U. S. Army
FORT D. A. RUSSELL, WYOMING.

I desire to submit to the profession a simple, rapid and efficient technic for giving hypodermic or intramuscular injections, which will be found peculiarly suitable where a large number of injections are to be given at once. I have used it in giving the antityphoid bacterin treatment to a battalion of infantry and the civilian population of an army post. It has stood the test. There has not been an infected arm as a result, and no patient has shown a temperature above 99 F.

The materials needed are:

The bacterin emulsion.

A glass-barrelled syringe. I use the Sub-Q tuberculin syringe because it is graduated in hundredths of a cubic centimeter and because it is not attacked by iodin as metal is.

Tincture of iodin, U. S. P.; some gauze or cotton.

The technic is as follows: As the men form in line with sleeves rolled up, an assistant, without further preparation, dabs the arms with the tincture. I dip my needle into the tincture of iodin, draw some up and expel it, then draw up one dose of the bacterin emulsion into the barrel and expel it; the syringe is now sterilized. I then fill the syringe with the bacterin and inject it into the iodin-painted area of the arm. I then dip the needle into the tincture without drawing any up, wipe it off with the gauze or cotton and am ready for the next case. After the last case the syringe is cleansed with the tincture followed by alcohol and then air until dry.

A PAINLESS MERCURIAL INJECTION FOR SYPHILIS

CHARLES M. WALSON, M.D.
In Charge of the Venereal Clinic of the St. Louis City Hospital Department
ST. LOUIS

One of the difficulties in the injection of mercury in the treatment of syphilis is the local pain caused by the injection, this varying in different individuals. Bearing in mind the value of quinin and urea hydrochlorid as a local anesthetic, it occurred to me that it might be combined to advantage with the mercury bichlorid solution in the hope of preventing some of the pain attendant on the use of that salt as an injection. Beginning some experiments with this in view, I found that equal parts of quinin and urea hydrochlorid 2 per cent. and mercuric chlorid 2 per cent., both in distilled water, when heated to the boiling point and mixed, resulted in a clear solution. This solution when mixed in a cold state, throws down a white precipitate. The solution should be injected before it becomes cold, as later crystallization takes place. Stronger solutions have a tendency to cause induration at the site of injection. I have used this injection more than 100 times and have kept the patients (nine in number) under close observation to the present time. With a few exceptions the pain has been very slight, the majority of patients saying that pain was entirely absent. The injections were made into the buttock. Patients often stated that on sitting down in a chair afterward there was a feeling of numbness. With the solution in the strength above indicated, there has been very little local reaction. The results so far, in my experience, have been very gratifying, and I believe the use of this anesthetic salt will do much to abolish the disadvantages of the injection of mercuric chlorid in syphilis.

Therapeutics

CHRONIC ENTERITIS IN ADULTS

For purposes of practical discussion, the term "enteritis" cannot be strictly limited to a condition affecting only the small intestine and characterized by the so-called catarrhal inflammation of the mucous membrane. It is convenient to use the term to include disturbances of the digestion which do not affect markedly the stomach or the large intestine, and which are not dependent on new growths, ulceration, volvulus or intussusception of the intestines. The term "intestinal indigestion" is applied to various forms of these disorders, but it is convenient to include them all under the term "enteritis."

The predominating clinical characteristic of these conditions is fermentation with the production of more or less gas. This may be accompanied in some cases by diarrhea; in other cases by constipation. When the condition continues for a considerable time, there may be interference with the appetite and disturbance of the general nutrition, accompanied by loss of flesh. There may also be depression of spirits, and hypochondriasis.

This condition of disturbance of the digestion in the small intestine may be due to the use of improper food, to neglect of the general physical condition, especially with regard to proper exercise, which is seen strikingly exhibited in people of sedentary habits; it may be due also to neglect of the regular evacuations of the large intestine. Associated with it may be disorders of the stomach, of the liver and of the pancreas, as well as of the glands of the intestinal mucous membrane. There may be also defective action of the muscular coat of the intestine. To several or to all of these disturbed conditions is due the fermentation of the contents of the intestine, accompanied, frequently, by more or less pain, and often by dizziness, headache, and generel indisposition.

The treatment of this condition varies according to the cause, the predominating pathologic condition, and the more marked clinical symptoms. The first and most important indication for treatment consists in regulation of the diet. While the ordinary healthy person should eat a variety of all sorts of foods, which are commonly approved of as suitable diet for the human family, when the digestion in the intestine is imperfectly performed, such articles of diet should be selected as are, for the most part, digested in the stomach so that a small amount of residue will be left to be acted on in the intestine. Not only this, but foods which are not digested in the stomach should be reduced to a minimum on account of the danger that fermentation may commence in the stomach and be continued in the intestine. Among the foods to be selected are, of course, milk (though milk may not be advisable), eggs and fresh meats, including beef, lamb and poultry, as these are chiefly digested in the stomach. These may be supplemented by moderate amounts of farinaceous foods, such as stale bread, dry toast, baked potato, and boiled rice. Other much used cereals, especially oatmeal, milk toast, and bread and milk, should be avoided. Also, there should be forbidden, temporarily at least, the use of green vegetables, salads, pastry, and other sweetened flour products. Of uncooked fruits, oranges and grapes may usually be permitted, as being less likely to interfere with intestinal digestion than other foods such as strawberries, raspberries, currants, peaches and apples. Tea and coffee should be used in very limited amounts, as they have a tendency to increase flatulence and, especially as regards tea, to increase constipation. Water should be taken in abundance. Little advantage will be derived from drinking excessive quantities of very hot water, although a glass of warm water at bedtime will generally prove useful.

All foods should be taken at regular intervals, and should be eaten slowly and carefully masticated. Intense mental application, after eating, should be avoided. Moderate exercise in the fresh air should always be insisted on. Alcoholic drinks should generally be forbidden.

MEDICINAL TREATMENT

In such cases as are characterized by the occurrence of one or several loose movements shortly after eating, a combination of ipecac, rhubarb and soda, as recommended by Dr. Francis Delafield, will frequently prove useful:

R	Gm.		
Ipecacuanhæ	|30		gr. v
Rhei	|60	or	gr. x
Sodii bicarbonatis	4|		ʒi

M. et fac capsulas 20.

Sig.: Take one capsule three times a day, before meals.

The official *Pulvis rhei compositus*, which contains rhubarb, magnesium and ginger, is also a good preparation for this condition. The dose is 2 grams (30 grains). Or the official *Mistura rhei et sodæ* (which contains ipecac, rhubarb, soda, peppermint, glycerin and water) may be used. The dose of this preparation is 10 c.c. (or 2 fluidrams), 2 teaspoonfuls.

If diarrhea is a prominent symptom, the use of bismuth will frequently be of advantage:

R	Gm.		
Bismuthi subcarbonatis	20|	or	ʒv

Fac chartulas 20.

Sig.: Take one powder three times a day, before meals.

If the loose movements are preceded or accompanied by pain, 0.015 gram (¼ of a grain) of codein sulphate may be given, for a few days, at the same time as the bismuth.

It is often better, instead of resorting to an opium or codein preparation, to give bismuth and salol, as:

R	Gm.		
Bismuthi subcarbonatis	20|		ʒv
Phenylis salicylatis	6|	or	ʒiss

M. et fac chartulas 20.

Sig.: One powder three times a day, before meals.

If, on the other hand, constipation and flatulence are prominent symptoms, such remedies should be prescribed as will increase the muscular activity of the intestine and will also increase the natural secretions of the digestive organs. For instance:

R	Gm.		
Fluidextracti rhamni pursianæ	10|		fl. ʒiii
Tincturæ nucis vomicæ	5|		fl. ʒiss
Tincturæ cardamomi compositæ	25|	or	fl. ℥i
Tincturæ gentianæ compositæ ad	100|		ad fl. ℥iv

M. et Sig.: One teaspoonful three times a day, before meals.

If the tongue is heavily coated and there are evidences of stomach indigestion, dilute hydrochloric acid, in a dose of 5 drops, in water, three times a day, after meals, is good treatment. Frequently, when there is a good deal of intestinal flatulence, the phosphate of soda, a teaspoonful of the effervescing salt, administered two or three times a day, seems efficient in preventing this fermentation. On the other hand, if the urine shows indican and there is, therefore, intestinal putrefaction, alkaline laxatives should not be administered, as they tend to perpetuate such alkalinity of the intestines and more putrefaction. Other laxatives than the saline alkaline salts should then be administered, if a laxative is needed. The putrefaction can sometimes not be stopped until meat is removed, at least temporarily, from the diet.

The digestive ferments are used a great many times for both gastric and intestinal indigestion. It is doubtful of what advantage they are. Sometimes they are combined with alkalies, and it is the alkali that may be of benefit. Sometimes they are combined with an acid, and it is very likely that the acid is of benefit. At other times they are combined with radical changes in diet, and probably it is the change in diet that is of advantage. The starch ferments and digestants may be of advantage, if given immediately before meals, by aiding some starch digestion during the first half hour or possibly hour of stomach digestion, i. e., before such time as free acid or a considerable amount of acid peptones have been produced in the stomach, at which time all starch digestion must cease. It is doubtful if pancreatin is of any advantage administered by the mouth. Its activity is certainly soon destroyed by the acid of the stomach. If protected by an alkali, as sodium bicarbonate, it might be active during the first part of the stomach digestion, but its advantage is probably slight.

The advantage of pepsin preparations or other protein digestants such as papayan is always a question. The amount of pepsin given is generally altogether too small to be of much value in digesting the protein that is ingested with an ordinary meal. Also, there is likely to be an acid in many pepsin preparations, and it is the acid that does the work. Again, some of these preparations are combined with various wine or alcoholic solutions, and these may slightly stimulate digestion. A digestant which acts both in mildly acid and mildly alkaline média may be of some advantage, but a correction of the diet, the prevention of fermentation and putrefaction, the proper daily bowel action, the soothing of any mucous membrane inflammation, and the administration of hydrochloric acid, if indicated, is generally sufficient to correct most indigestions that are not due to organic disease.

The temperature of articles, especially fluids, taken into the stomach sometimes has a distinct effect on the action of the bowels. If there is much pain with the loose movements, it will be found that warm or hot drinks are less likely to aggravate the trouble, while, on the other hand, cold drinks will increase the pain and cause more frequent movements of the bowels. When there is constipation, cold drinks are more likely to stimulate the action of the bowels, although excessive cold drinks should not be given on account of the danger of interfering with the glandular secretions of the stomach and intestine.

The only scientific way, provided that simple treatments do not correct the indigestion and stop the enteric disturbance, to determine exactly what the mistake is, is to examine the stools under a known diet. This will generally disclose the exact mistake in the digestive process, and show what foods are perfectly digested, and what are imperfectly digested. (See The Journal, Nov. 19, 1910, page 1810.)

It should also be remembered that sometimes thyroid disturbance is the cause of intestinal indigestion. This is a rather frequent etiologic factor, especially in women.

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[*For other information see second page following reading matter*]

SATURDAY, JUNE 3, 1911

THE GLYCYL-TRYPTOPHAN REACTION IN GASTRIC CANCER

The so-called glycyl-tryptophan reaction of Neubauer and Fischer[1] is based on the fact that normal peptic digestion does not resolve albuminous substances into their ultimate constituents, the amido-acids, but into intermediate bodies, the further breaking up of which is completed lower in the alimentary canal. But although the pepsin of the stomach is incapable of producing amido-acids, this property is possessed to some extent by trypsin, by the autolytic ferments of various body tissues, and particularly by those of malignant tumors.

In gastric carcinoma, therefore, we have a tissue capable of secreting a ferment of this latter sort, and we may expect to find in the products of gastric digestion, in this condition, the amido-acids that would normally be absent. To demonstrate the presence of this ferment, Neubauer and Fischer subjected to the digestive action of the stomach contents to be tested, a dipeptid, that is, a compound of two simple amido-acids, whose cleavage would yield an easily identified product. For this purpose they selected glycyl-tryptophan, inasmuch as tryptophan is perhaps the most easily recognized of the amido-acids.

As was pointed out, indeed, by the originators of the test, the sources of error are both numerous and important. The presence of marked acidity, of blood or exudate, of pancreatic secretion—all can contribute to an erroneous positive result. Tryptophan itself seldom —practically never—occurs in normal stomach contents, and its presence after a proteid meal is so rare in nonmalignant diseases that Weinstein[2] holds that its occurrence is in itself significant of malignancy. The source of error most difficult of elimination is the possible presence of pancreatic secretion, as no means of recognizing this *per se* are known. The only way, but a necessarily unreliable one, is that suggested by the originators of the test—the demonstration of the presence of bile.

Some effort, hitherto without result, has been made to find a dipeptid capable of resisting pancreatic digestion, and yielding an easily recognized cleavage product. The "silk peptone" used by Kuttner and Pulvermacher[3] in place of glycyl-tryptophan offers no advantages in this respect, but the claim is made that the blood ferments are without action on it.

The reaction has now been in limited use for about two years, and a recent summary has appeared of the results obtained so far.[4] Positive tests were obtained in 84 per cent. of cases later confirmed by autopsy, in 75 per cent. of cases with diagnoses clinically certain, in 23 per cent. of suspect cases, and in 12 per cent. of nonmalignant cases. No normal stomachs were found to give the reaction. In view of such findings, the pessimistic conclusions expressed by some of the workers appear somewhat unfounded. Unfortunately, its value in early cases, in which the necessity for an accurate diagnosis is greatest, is almost unknown. If, as has been suggested and as appears probable, the autolytic ferment is excreted into the stomach only with the onset of ulceration of the tumor, it would appear as a rule only comparatively late in the disease, and so be of slight use from the viewpoint of early diagnosis. Its reliability is greatly increased by several repetitions of the test, and Lyle and Kober,[5] who have obtained strikingly accurate results with it, call particular attention to the value of several negative findings. It is probable that the final position of the reaction will be that of our other laboratory measures for the diagnosis of gastric carcinoma. And, inasmuch as it is founded on a principle entirely independent of those underlying our more usual tests, it will almost certainly have a distinct place as one of the several factors to be considered in establishing a diagnosis.

COLD-STORAGE EGGS

The modern development of cold-storage methods has in several ways added to the perplexities of health administration. On the one side are the obvious advantages, economic and other, of carrying over valuable but perishable foods from a time when they are not needed to a time of relative scarcity. On the other hand are the well-known abuses of "cornering" which raises the price both in the time of abundance and the time of scarcity, and of overlong storage which may cause wasteful or injurious deterioration. Attempts to remedy these abuses by legislative enactment are now being made, one of the most popular apparently being a three-months' time limitation on the storage period.

So far as eggs are concerned this movement is meeting with great opposition from large dealers, who point out that three months is quite too short a period to make storage commercially profitable. The question then seems to be whether fraud on the public purse or injury to the public health can be traced to the storage of eggs at a low temperature for a period longer than three months. Published observations,[1] although rather meager, show that progressive physical changes take place in cold-storage eggs, such changes being especially evidenced by loss of weight and by an increased tendency of yolks and whites to mingle. Chemically, there is a lowering of the amount of coagulable protein and a lowered percentage of lecithin phosphorus. An increase in the lower nitrogen bodies, proteoses and peptones, is noted, while there is apparently a decrease in amido bodies. Bacterially, storage eggs appear to be sterile or inhabited by a few colonies of the more resistant fungi. Whether such changes as those indicated impair the food value of the egg or render it injurious to health is a point worthy of investigation. It does not follow that, because chemical alterations have occurred in a nitrogenous substance, the resulting product is necessarily unfit for food. Ripened cheese has been ordinarily subjected to the long-continued action of enzymes and bacteria, but its food value appears to be high.

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[1] Neubauer and Fischer: Deutsch. Arch. f. klin. Med., 1909, xcvii, 499.

[2] Weinstein, J.: The New Test for Cancer of the Stomach, with Suggested Improvements, THE JOURNAL A. M. A., Sept. 24, 1910, p. 1085.

[3] Kuttner and Pulvermacher: Berl. klin. Wchnschr., 1910, xlvii, 2057.

[4] München. med. Wchnschr., 1911, lviii, 674; abstr. in THE JOURNAL, May 6, p. 1370.

[5] Lyle and Kober: New York Med. Jour., 1910, xci, 1151.

Of course, quite apart from the effect of cold storage on the food value of eggs, the fact that most people find cold-storage eggs less palatable than fresh eggs renders the former less available for many uses. While the buyer is able to judge of the quality of most foodstuffs by their appearance in the market, a cold-storage egg, when offered for sale, is practically indistinguishable from a fresh one; it is on the table if at all that the difference is apparent. Whatever the final decision as to the effect on health of the use of cold-storage eggs, therefore, the public has a right to demand that it shall not be made to buy cold-storage eggs under the belief that they are fresh, or to pay the price of fresh eggs for stored ones. It seems possible that if dealers were compelled to call cold-storage eggs by their right name and to state the length of time they had been in storage, many of the disadvantages now ascribed to the practice of cold storage would be removed. At least, it is probable that the industry would tend to assume less speculative and more normal proportions.

DANGER OF PANCREATIC EXTRACTS

While much of the advance in therapeutics is due directly or indirectly to experimental work on animals, it should be borne in mind that the administration of remedies to patients can seldom realize experimental conditions. The physician who assumes that, because in an animal experiment the hypodermic injection of a certain remedy has produced certain effects, similar results will follow its administration to man by the mouth, is apt to fall into error. This is well exemplified by the results of the attempts to secure an action on the metabolism of sugar by the use of pancreatic extracts. Assuming that diabetes is due to a failure of the pancreas to produce its internal secretion, there is a strong temptation to try to remedy this defect by using an extract of the pancreas as a substitute for the missing secretion.

Clinically such attempts have been failures. One reason for this may be that the amount of secretion present in the pancreas at one time is probably only a fraction of the amount necessary for the total metabolism of sugar for twenty-four hours. There is good reason to suppose that the pancreas is continually pouring its secretion into the blood in proper quantities, while the injection can be made usually not oftener than once a day.

In some cases the destruction of sugar effected by these remedies has been due to a toxic action which did not improve the patient's condition, although it temporarily lessened the amount of sugar.

The experimental proof that the extirpation of the pancreas can cause the appearance of diabetes led Zuelzer to attempt the production of an extract of pancreas which he believed to act as a hormone to stimulate the utilization of sugar in the economy. This hormone has been tested by J. Forschbach[1] with unfavorable results. In animal experiments the preparation showed the power to reduce the excretion of sugar temporarily, while it also produced some symptoms of poisoning with elevation of temperature. The trial was then made on diabetic patients with the result that, although there was a slight reduction of sugar excreted, the temperature rose and the patients presented indications of marked poisoning. The acidosis was unaffected and the sugar returned after a short time to its original height. Zuelzer is much inclined to attribute the temporary reduction of sugar to the toxic action of the remedy or to the febrile temperature excited by it. At any rate he concludes that the injurious effects of the remedy are so manifest that it is unjustifiable to subject patients to such danger for the slight advantage gained by the reduction in the amount of sugar excreted.

The action of extract of pancreas on animals with pancreatic diabetes and on normal animals has been investigated by E. Leschke.[2] Pancreatic extract derived from frogs or guinea-pigs was injected subcutaneously and intravenously into normal frogs and guinea-pigs and also into frogs from which the pancreas had been removed. The fresh pancreatic extract was used, also the same extract inactivated by heating it to 70 C. for a quarter of an hour and also that which had been heated for ten minutes to 100 C. The urine of the animals was examined for the presence of sugar. The experiments show that injections of fresh pancreatic extract occasion diabetes in normal animals, and in those animals that have pancreatic diabetes it increases the glycosuria. At the same time a severe disturbance of the general condition, which led to death within a short time, appeared regularly under the influence of the injections. Pancreatic extract inactivated at 70 C. did not markedly affect the excretion of sugar, but it had a marked toxic action. Pancreatic extract heated to 100 C. could be injected without any injurious consequences. The investigations indicate that there is no scientific basis for treating diabetes with extracts of pancreas.

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[1] Bull. 115, U. S. Dept. Agric., Bureau of Chemistry.

[1] Forschbach, J.: Deutsch. med. Wchnschr., Nov. 25, 1909.

[2] Leschke, E.: Arch. f. Anat. u. Physiol., 1910, Physiol. Abt., p. 401; abstr. in Chem. Zentralbl., Feb. 15, 1911, p. 505.

OUR VANISHING SHORE-BIRDS

The cosmic scheme is one of most intricate interrelation, in which the fact that living things are organized to prey on one another plays a most important part. Man's activities in modifying this scheme produce far-reaching results, generally unforeseen, sometimes disastrous for him. When, for example, we cause the wholesale destruction of harmless snakes we shall find in consequence a vast overproduction of grain-destroying rats and mice, such as are the natural prey of snakes. The brutal and insensate destruction of birds, to take another example, is followed by an incalculable increase in disease-conveying and otherwise pernicious insects.

This observation is apropos of an important investigation made by W. L. McAtee of the Biological Survey,[1] which demonstrates that our shore-birds throughout the eastern United States are fast vanishing. Of these long-legged, slender-billed and usually plainly colored birds there are more than sixty species in North America. They frequent the shores of all bodies of waters, large and small; but many of them are equally at home on plains and prairies. Numerous species formerly swarmed along the Atlantic coast and in our prairie regions; their extermination now seems imminent, so scarce have they become. The black-bellied plover was in great numbers along the Atlantic seaboard years ago; it is now but a straggler. East of the Great Plains the golden plover was once abundant; it is now rare. Great flocks of long-billed dowitchers formerly wintered in Louisiana; one sees now but flocks of a half dozen or less. The Eskimo curlew has probably been exterminated in the last decade, and other curlew species are greatly reduced.

The wonder is that any of these birds survive, so adverse to their existence are present conditions. In both fall and winter they are shot along the route of their north and south migration. They decoy readily and persistently, despite murderous volleys. The breeding-grounds of some species have become greatly restricted by the extension of agriculture, and their winter ranges in South America have no doubt been restricted in like manner. In several other ways pointed out by McAtee is their existence made most precarious.

Not by any means on sentimental or esthetic grounds alone need we plead for the protection of shore-birds. Many species eat mosquitoes, such as play so important a part in disease dissemination. Fifty-three per cent. of the food of birds from one locality was found to consist of mosquito larvæ; and among the insects thus eaten was the salt-marsh mosquito, for the elimination of which the state of New Jersey has expended much in money and energy. Cattle and other valuable live stock also are greatly molested, not only by mosquitoes, but also by horse-flies. Adults and larvæ of the latter have been found in the stomachs of several species of birds. The killdeer and the upland plover, moreover, devour the North American fever tick, so injurious to cattle. Crane-fly larvæ are frequently most destructive in grass-lands and wheat fields; among their many enemies shore-birds rank high. These birds, again, are very fond of grasshoppers, which, as all know, are most destructive of corn, cotton and other crops. Again, twenty-three species of shore-birds were found to have fed on Rocky Mountain locusts (great grain-consumers) in Nebraska.

Some of our severest economic losses are occasioned by insect pests of forage and grain crops; these pests are a natural food of shore-birds. The army-worm, cut-worm, cotton-worm, tobacco-worm and potato-worm are meat for the avocet, woodcock, pectoral and Baird sandpipers, upland plover and killdeer. The principal farm crops have many beetle enemies; birds thrive on these beetles. The boll weevil and clover-leaf weevil are food for the upland plover and the killdeer; the rice weevil for the killdeer; the cowpea weevil for the upland plover. Crayfish are a pest in southern rice- and corn-fields and they injure levees; they are a favorite food for the black-necked stilt, jacksnipe, robin snipe, spotted sandpiper, upland plover and killdeer. In Texas the upland plover follows the plough and eats grubs destructive to garden stuff, corn and cotton crops.

It would be well indeed for all the governments of states in which these birds have their habitat to legislate for their protection. Massachusetts, Vermont and Louisiana have established a continuous close season for some of these species until 1815; much more than this, however, is essential to be done.

Current Comment

ANOTHER PURE FOOD DECISION

Another legal decision on the interpretation of the federal Food and Drugs Act has been handed down. This time it is from Justice Vedder of the United States Circuit Court for the Eastern District of New York. The government officers whose duty it is to enforce the Food and Drugs Act charged that the "peroxid cream" manufactured by that cooperative "patent medicine" concern known as the A. D. S. was misbranded under the act. The reason for their contention was that the amount of peroxid present in the cream was so insignificant that it could have no practical therapeutic value. While there was no denying the fact, Judge Vedder decided against the government. If this judge's view of the case is a correct one, it is necessary, apparently, merely to have an infinitesimal quantity of any ingredient in a mixture to be able to give that mixture the name of such an ingredient. As the law, which the judge says was not violated, also covers the subject of food as well as drugs an extension of the principle enunciated by the court may be looked for. A pailful of miscellaneous vegetable pulp correctly doctored with the necessary amount of saccharin, sodium benzoate and coal-tar dye may be sold to the unsuspecting purchaser for strawberry jam — providing the manufacturer is careful to put a few strawberries in the pail. The gentleman just outside the entrance to the circus who dispenses the highly colored liquid sweetened with saccharin, acidified with citric acid and dignified by the name of Lemonade, is evidently well within his legal rights because he usually has at least half a lemon floating on the top of the barrel. The point in law should be still further extended. It is hardly fair to allow the dispensers of drugs and foods a monopoly on humbugging the public. The flashy gent who attempts to dispose of his specialty to the unsuspecting rustic should be absolved from all legal consequences providing his brick is gold-plated on at least one side.

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[1] McAtee, W. L.: Our Vanishing Shore-Birds, Circ. 79, Bureau Biol. Survey, U. S. Dept. Agriculture.

SEXUAL HYGIENE IN THE AUSTRIAN SCHOOLS

In this country, we usually credit ourselves with progressive ideas. Americans who take any note of affairs in the Old World, however, sometimes find that while we have been dallying with progressive ideas, the forward step has been taken in Europe. In view of the discussion in regard to the possibility of introducing instruction on sexual hygiene into our public schools, it is interesting to observe that this step has already been taken in Austria, as will be seen by the letter from our Vienna correspondent in this issue. For three years instruction on this topic has been given, in connection with the teaching of anatomy, to pupils in the Austrian schools preparatory for the university and the other schools of the same grade; and recently it has been introduced experimentally into the course for those pupils who leave school in their fourteenth year. It has also been a part of the curriculum in German schools for two or three years. It will be of value for us to observe the results of this experiment, which we consider full of difficulties, but which in some respects would seem to be a more difficult one to make in continental Europe, where the traditions are so strongly in favor of keeping the youthful mind a blank on such subjects.

MILK LEGISLATION IN ONTARIO

One of the most prominent subjects of legislation by state and local authorities at the present time is the subject of clean milk, and many laws have been placed on the statute-books governing the production and sale of this important article of food. The province of Ontario has recently passed an act which provides very stringent regulations for the production and distribution of milk in all its stages, defines the conditions under which "certified" milk is to be produced, which includes the semi-annual tuberculin testing of the cows, and prescribes the rules for pasteurizing milk. Municipalities are given full authority to make all regulations coming within the purview of this act and to enforce them rigidly. It is one of the most stringent milk laws which has yet come under our observation, being more strict than many of the enactments in the United States which have aroused the strenuous opposition of milk producers and distributors. Like most Canadian laws, this will no doubt be rigidly enforced, and it will be profitable for us on this side of the border to observe the results. The consideration which has hitherto restrained many who would otherwise have been in favor of more stringent regulation of the dairy industry is the fear of increasing the cost of milk to the poor. At the same time, the importance of this article of food and its great susceptibility to contamination justify the most earnest effort to ensure cleanliness and care in its production and distribution. It is to be hoped, therefore, that we shall have full reports of the practical workings of the Ontario Milk Act.

SAFEGUARDS FOR MARRIAGE

That there should be more restrictions thrown about the marriage relation is the firm opinion of most students of the subject. A very pointed remark is contained in the report of the Vice Commission of Chicago, a book to which we shall probably refer more at length later. The report says:

> An application for a license of any kind, whether it be to construct a house, run a push-cart, peddle shoestrings, or keep a dog, must be accompanied with evidences that the applicants are responsible and reliable agents. But for a marriage license, one person, unattended and unknown and, as far as one can know, an epileptic, a degenerate, or who has in his blood a loathsome venereal disease may pass his name through a window with that of a similarly questionable female, likewise unknown, and be granted the divine right to perpetuate his kind in turn, thereby placing a burden and blight on society and the community for generations to come.

Not all agree on the methods, but as public opinion is educated to the need for some modification of our present rules, there will come about the possibility of improving conditions.

DIETETICS TAUGHT BY CARTOON

One of Briggs' recent cartoons in the Chicago *Tribune* contains a very suggestive lesson in dietetics. Three pictures are shown. In the first, an automobile is seen with a grocer pouring gasoline into the tank; the owner of the car excitedly exclaims, "Hey! What grade is that gasoline? Are you straining it properly?" The second picture represents the same characters, but this time the machine is being supplied with oil; the owner solicitously inquires, "What kind of lubricating oil are you giving that car? I want the best." In the third picture, the automobile owner is seen sitting at a restaurant table, ordering for himself a variety of foods that would make a dietitian shudder. Evidently, careful as he is in regard to the quality and character of the food he gives his automobile, the purity of the fuel he supplies for his human engine is immaterial; it may be good, bad, or indifferent, "strained" or not. The cartoonist might have carried the lesson yet a little farther by showing the amiable imbecility of the average human being in caring for the most delicate of all machinery—his own body. He might have shown the owner of a valuable car seeking the most expert machinist to repair his machine. Later the same man could have been pictured as seeking the services of the most ignorant quack, or as administering to himself some darkly mysterious combination of drugs in the form of a "patent medicine," when his own infinitely complex physical mechanism becomes disordered. The force of such satire does not rest on exaggeration; it is all, unfortunately, based on most sober and commonplace fact. What an interesting note on the intelligence of the average earth-dweller might be made from these data by a tourist from Mars!

PAY NO MONEY TO UNAUTHORIZED PERSONS

For the past five years we have published weekly in THE JOURNAL the following: "WARNING: Pay no money to any agent unless he presents a letter showing authority for making collections." It would seem that physicians would hesitate to pay money to transient and unknown individuals who are able to present no identification, and yet there seems to be continued carelessness on this point. Last week[1] we warned our readers against a subscription agent who gave the name of A. S. Brown and who claimed to represent the Seattle Subscription Company of Seattle, Wash. Several physicians had paid him money and failed to get any return for it. News is now received of a man—who may be the same person—who has swindled people in the same way in Colorado and Wyoming and who was reported to have gone to the northwest. This man collects money in advance, which his victims never see again, nor do they receive an equivalent. It is alleged that he uses various names, one of which is A. G. Stevens, care of the Denver News Company, a firm which apparently does not exist. This is another reminder that it is very foolish to pay money to unknown persons.

"REASONABLE" LYING PERMISSIBLE

The United States Supreme Court has decided that there is nothing in the Food and Drugs Act that prohibits Johnson, the cancer quack of Kansas City, from making lying assertions on the labels of his nostrums providing such mendacity does not relate to their composition. The pure food and drug law is held to protect the consumer only against false statement regarding the composition of medicines and not against falsehoods concerning their curative value. Briefly the facts are as follows: Johnson printed falsehoods on the labels of his "cancer cure" regarding its curative effects. The federal officials intrusted with the enforcement of the Food and Drugs Act took the ground that such falsehoods constituted misbranding under that provision of the act which reads in part as follows:

> " . . . the term 'misbranded' . . . shall apply to all drugs . . . the package or label of which shall bear *any statement . . . which shall be false or misleading in any particular. . . .* " [Italics ours.—ED.]

When the case came to court Johnson's lawyers held that the Food and Drugs Act was not intended to apply to claims for the curative effects of medicine, but only to claims about the composition. The judge of the lower court upheld this contention and decided in Johnson's favor. The federal officials carried the case to the United States Supreme Court and that court has just affirmed the decision of the lower court. It should be said, however, that three of the Supreme Court judges dissented from the decision—Justices Hughes, Harlan and Day. According to press dispatches, the Supreme Court acknowledged that the claims made by Johnson were untruths, but held that the federal Food and Drugs Act should not be construed to cover that particular kind of lying. All who are interested in the protection of the public health and particularly in the protection of the sick will regret that the federal Food and Drugs Act was so loosely worded as to be unable to stand this vital test of its efficiency. The various cancer fakers—of whom Johnson is a type—who have been driven out of business under the law as previously interpreted, will now be free to resume their damnable trade unmolested. As the people of the United States have evidently not made their will clear in the pure food law, they should now do so. It is imperative that this law be immediately amended so as to state positively and unequivocally that lying of all kinds shall be illegal when applied to foods and drugs. There is no more pressing piece of legislation needed than such an amendment. The result of this decision means, as the press dispatches to some of the Chicago papers state:

> "Medicine that is nothing but sweetened water, or pills composed of colored mud, may be labeled 'cures' and sold as such with impunity under the national pure Food and Drugs Act."

So far as the "patent medicine" fakes are concerned, there is now practically nothing to prevent the imposition of the grossest of frauds on the public. The "patent medicine" vendors do not care particularly about having to tell the truth about the composition of their nostrums; they do desire, however, to make such assertions as they see fit regarding the alleged curative properties of their preparations.

Medical News

FLORIDA

New State Laboratory.—Work on the new two-story brick and concrete laboratory for the State Board of Health, Jacksonville, has commenced. The new building is to be on the site of the old city jail on Julia Street. The building is estimated to cost $35,000, and will contain, in addition to the laboratories, the offices of the State Board of Health.

Meeting of Florida Physicians.—At the thirty-eighth annual session of the Florida Medical Association, held in Tallahasse, May 10-12, Tampa was selected as the place of meeting for 1912 and the following officers were *elected: president,* Dr. Albert H. *Freeman,* Starke, and vice-presidents, Drs. Joseph D. Bennett, Crystal River, and Nicholas A. Baltzell, Marianna. Dr. Joseph N. McCormack, Bowling Green, Ky., delivered an address before the association on "The Physician's Position with the People," and Dr. B. Merrill Ricketts, Cincinnati, an address on "Our Operations on the Chest."

IDAHO

Hot Springs Leased.—Dr. Henry W. Clouchek, Twin Falls, has leased Lava Hot Springs in Bannock County for twenty-five years, and will develop the property as a health resort.

Personal.—Dr. Fred A. Pittenger, Boise, who has been ill for several days, is reported to be convalescent.——Dr. George E. Hyde, Rexburg, president of the State Board of Health, has been named as delegate to the National and Provincial Convention to the State Board of Health, San Francisco.——Dr. Darius D. Drennan, Rathdrum, has been appointed physician of Kootenai County.——Dr. Malcolm McKinnon, Sandpoint, has been appointed physician of Bonner County.——Dr. Frederick Epplen, St. Joe, has started for Europe. Dr. Delos E. Cornwall succeeds him as district surgeon.

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[1] THE JOURNAL, May 2[illegible], 1911, p. 1584.

ILLINOIS

New State Hospital Site.—Dixon and Rockford are said to be making strenuous efforts for the location of the new state insane hospital for which $1,500,000 was appropriated by the last legislature.

Honor Retiring Officer.—Dr. Frank H. Jenks, for many years assistant superintendent of the Elgin State Hospital, left that institution, May 10, to take charge of the Ransom Sanitarium, Rockford. Before he left a farewell dinner was given in his honor by Dr. Sidney D. Wilgus, superintendent of the institution, and Dr. Jenks was presented by the medical staff with an office chair and a purse of money.

Personal.—Dr. Henry A. Bremmer, Ashton, with his wife and daughter, sail for Europe, June 17.——Dr. Nelson E. Oliver, Thornton, is reported to be seriously ill with septicemia.——Dr. Albert S. Green, Rockford, who has been seriously ill, is reported to be improved.——Dr. and Mrs. Joseph W. Smith, Bloomington, were seriously injured in an automobile accident near Covington, Ind., May 21.——Dr. Michael F. Dorsey, Streator, who has been seriously ill with pneumonia at Mercy Hospital in Chicago, is reported to be improving.

Chicago

Noted Chemist Dies.—Prof. Marcus A. de la Fontaine, for thirty years professor of chemistry in the Chicago high schools, frequently an expert witness in poisoning cases, died at his home, May 21, aged 73.

Physicians' Club Dinner.—At the annual meeting of the Physicians' Club of Chicago, held in the new Sherman House, May 26, Dr. Alfred N. Murray was elected secretary and Drs. George E. Baxter, Alexander H. Ferguson and Harry P. Woley were elected trustees.

Mary Thompson Hospital Affairs.—Dr. Frances Dickinson has been added to the board of trustees of the Mary Thompson Hospital. There is now in the bank a fund of $10,000 to the credit of the hospital and the Chicago Woman's Club will provide, it is said, against any deficit.

Pediatric Society Election.—At the annual meeting of the Chicago Pediatric Society, held May 22, Dr. John M. Dodson was elected president; Dr. Alexander C. Soper, vice-president; Dr. Joseph W. Brenneman, secretary; Dr. Mark Jampolis, treasurer; Dr. Henry F. Helmholz, editor, and Dr. Isaac A. Abt, member of the executive committee.

Sprague Memorial Institute.—The Otho S. A. Sprague Memorial Institute was organized in January, 1911. It is a memorial to the late Otho S. A. Sprague, who designated his brother, A. A. Sprague, as the chief instrument through whom funds left by will should be expended. The institute was organized by Mr. A. A. Sprague with the following as members of the corporation and the first board of directors: A. A. Sprague, A. A. Sprague II, son of Otho S. A. Sprague, Messrs. A. C. Bartlett, J. P. Wilson, C. L. Hutchinson, Byron L. Smith and Martin A. Ryerson, and Dr. Frank Billings. The directors have decided on medical research as the chief object for which the income of the memorial funds shall be expended and have elected Dr. H. Gideon Wells of the University of Chicago to direct research in medical problems. The work will be done in cooperation with the University of Chicago, Rush Medical College, Presbyterian Hospital and the Children's Memorial Hospital of Chicago. The institute will command a definite number of beds in the Presbyterian Hospital for the study of any disease under investigation. An advisory council has been appointed consisting of Drs. Frank Billings, James B. Herrick, Joseph L. Miller, Edwin R. Le Count, Ludvig Hektoen and Profs. E. O. Jordan and Julius Stieglitz.

IOWA

New State Journal.—The Iowa State Medical Society has decided to own and edit its own official organ. It has given authority for the purchase of the *Iowa Medical Journal* from Dr. Edward E. Dorr, Des Moines, its editor and proprietor, and will continue this publication as the official journal of the society under the editorial management of Dr. David S. Fairchild, Clinton.

State Society Meeting.—The sixteenth annual meeting of the Iowa State Medical Society was held in Des Moines, May 17-19, under the presidency of Dr. Mathew N. Voldeng, Cherokee. Dr. George W. Crile, Cleveland, O., delivered the address on surgery and Dr. James B. Herrick, Chicago, the address on medicine. The following officers were elected: president, Dr. Lawrence W. Littig, Iowa City; vice-presidents, Drs. Henry A. Leipziger, Burlington, and Van Buren Knott, Sioux City; secretary, Dr. Vernon L. Treynor, Council Bluffs (reelected); treasurer, Dr. Thomas E. Powers, Clarinda; and delegates to the American Medical Association, Drs. Max E. Witte, Clarinda; Edwin Hornibrook, Cherokee, and Francis E. V. Shore, Des Moines. Burlington was selected as the place of meeting for next year.

KENTUCKY

Ten-Cent Day in Louisville.—As a result of the 10-cent day in Louisville, April 26, $2,600 was received, nearly $1,000 less than the amount collected on a similar occasion two years ago.

Railway Surgeons Assemble.—At the seventh annual meeting of the Kentucky State Association of Railway Surgeons, held in Louisville, May 10-12, the following officers were elected: president, Dr. Charles H. Kearns, Covington; vice-presidents, Drs. Waller O. Bullock, Lexington; David Y. Roberts, Louisville, and William Cheatham, Louisville; secretary, Dr. James B. Kinnaird, Lancaster, and treasurer, Dr. Clarence H. Vaught, Richmond. Lexington was selected as the next place of meeting.

LOUISIANA

Parish Society Election.—Lafayette Parish Medical Society, at its meeting in Lafayette, May 6, elected Dr. Robt. D. Voorhies, president and delegate to the state medical society; Dr. Fred'k R. Tolson, vice-president and alternate delegate, and Dr. Lambert O. Clark, secretary and treasurer, all of Lafayette.

The Work of the Milk Commission.—At the second annual meeting of the Milk Commission, New Orleans Pure Milk Society, held in the Orleans Parish Medical Society Building, May 1, the officers were reelected. The secretary reported that several dairymen had signed agreements to serve only milk certified by the commission, and that others were likely to sign similar agreements. The milk thus dispensed has been freely tested and proved worthy of endorsement. The organization now numbers 119 members and a balance of $521.91 is reported.

Personal.—Col. William Gorgas, M.C., U. S. Army, had conferred on him the degree of LL.D. by Tulane University, May 17. At the same time Dr. Philip Frank, instructor in physiology in Tulane University, received the degree of B.Sc.——Drs. James P. Heard and Harry B. White have been appointed members of the Board of Health of Gueydan.——Dr. Jesse R. Johnson has been made president of the Board of Health of Amite City.——Dr. J. M. Bonnette, Pollock, fell in his office, May 4, sustaining a comminuted fracture of the left arm and a dislocation of the shoulder.

MARYLAND

Personal.—Dr. Frank H. Ruhl, Lansdowne, health officer of the thirteenth district, had a cerebral hemorrhage, May 7.——Dr. Henry W. McComas, Oakland, has succeeded Dr. John E. Legge, term expired, as secretary of the Board of Health of Garret County and physician to the county jail.

County Society Meeting.—At the annual meeting of Baltimore County Medical Society, held at Towson, Dr. Edward N. Brush, Towson, retiring president, delivered the annual address on "Experts and Expert Testimony" and the following officers were elected: president, Dr. Josiah S. Bowen, Mount Washington; vice-president, Dr. William L. Smith, Rider; corresponding secretary, Dr. Richard C. Massenburg, Towson; recording secretary, Dr. J. C. McCormick; treasurer, Dr. F. C. Eldred; delegate to the Medical and Chirurgical Faculty of Maryland, Dr. Henry L. Naylor, Pikesville, and alternate, Dr. L. Gibbons Smart, Lutherville.

Baltimore

Personal.—Dr. Duncan McCalman sustained a fracture of the clavicle and severe bruises by the overturning of his automobile, May 13.——Dr. George B. Scholl, business manager of the Franklin Square Hospital, has resigned, to take effect June 1.

Correspondence of Revolutionary Times.—Dr. Eugene F. Cordell is publishing in *Old Maryland* the interesting correspondence of the Drs. Wiesenthal during the Revolution. The elder Wiesenthal was an eminent surgeon who conducted a private medical school in Baltimore.

MASSACHUSETTS

Bequest to Medical School.—Harvard Medical School has been bequeathed $22,000 by the will of the late Prof. Samuel Hubbard Scudder.

Hospital Dedicated.—The new St. Margaret's Hospital, connected with St. Mary's Infant Asylum, Dorchester, was dedicated recently with impressive ceremonies.

Carnation Day.—May 20 was observed in Lynn as Carnation Day when the residents of the city and visitors were solicited to purchase carnations from children who had them on sale in the streets, stores, office buildings and public places. The proceeds of the sale were devoted to the support of the Day Camp for Tuberculosis situated in the midst of the Swampscott woods. The camp opened for the season, May 3, and will be able to accommodate forty-five patients.

MISSOURI

Small-Pox at State University.—Nine students of the University of Missouri, Columbia, have small-pox. There are said to be altogether sixteen cases of small-pox in the city; 1,600 persons have been vaccinated and 80 are under quarantine. A commission consisting of Dr. Woodson Moss, health commissioner, and Drs. Joseph E. Thornton, James Gordon, William G. Brown and David H. Dolley has been appointed to take care of the situation.

Personal.—Dr. William J. Calvert, Columbia, has been elected professor of preventive medicine in the University of Missouri.——Dr. John N. Baskett has been elected president of the Levering Hospital, Hannibal.——Dr. Richard L. Johnson, Rolla, a practitioner for nearly forty years, has retired from practice and will make his home with his son in Altoona, Kan.——Dr. Gustave Ettmueller, Jefferson City, has been appointed physician of Cole County and Dr. Horden T. Leach, Elston, physician to the County Farm.——Dr. Albert Willis, Birdpoint, has been appointed division surgeon for the Iron Mountain System.

NEW HAMPSHIRE

State Medical Meeting.—At the annual meeting of the New Hampshire Medical Society, held in Concord, May 11-12, the following officers were elected: president, Dr. George W. McGregor, Littleton; vice-president, Dr. John W. Staples, Franklin; secretary, Dr. D. Edward Sullivan, Concord (reelected); treasurer, Dr. David M. Currier, Newport; councilors for five years, Drs. Walter Tuttle, Exeter, and Louis W. Flanders, Dover; trustee for three years, Dr. John M. Gile, Hanover; delegate to the American Medical Association, Dr. John Z. Shedd, North Conway; alternate, Dr. Irving A. Watson, Concord; delegates to the Maine Medical Association, Drs. Thomas W. Luce, Portsmouth, and George P. Morgan, Dover; delegates to the Massachusetts Medical Society, Drs. Edward F. Houghton, Tilton, and Ira J. Prouty, Keene; necrologist, Dr. Eli E. Graves, Boscowen; anniversary chairman, Dr. Louis W. Flanders, Dover; committee on public health and legislation, Drs. Charles Duncan, Concord, and George A. Weaver, Warren, and committee on scientific research, Drs. John M. Gile, Hanover, Dennis E. Sullivan, Concord, and Louis W. Flanders, Dover.

NEW YORK

State Board Officers.—The New York State Board of Medical Examiners announces the election of the following officers: president, Dr. Glentworth R. Butler, Brooklyn; vice-president, Dr. Henry B. Minton, Brooklyn, and chairman of the question committee, Dr. Lee H. Smith, Buffalo.

Amendment to State Charities Law.—The governor has signed the amendment to the state charities law providing that no patient shall be received in the New York State Hospital for the Care of Crippled and Deformed Children except on application of a county poor superintendent or a city or county commissioner of charities.

Alienists Approve Conduct of State Hospital.—The report of the expert alienists, who have been inquiring into the conditions of the Matteawan State Hospital for the Criminal Insane, is entirely favorable to the conduct of the institution. They recommend that the hospital be taken from the jurisdiction of the prison commission and be placed under the supervision of the state commission of lunacy.

Personal.—Dr. Alvah H. Traver has been nominated as a member of the board of governors of Albany Hospital vice Dr. Willis G. Macdonald, deceased.——Dr. George H. Davis has been elected health officer of Le Roy and Dr. Charles D. Graney, secretary of the village board of health and registrar of vital statistics.——Dr. Hugh H. Shaw, Utica, has been appointed medical examiner of the civil service commission of that city, vice Dr. David H. Roberts.

Another Antivivisection Bill.—Senator Bayne has introduced another bill into the legislature to provide for a commission of seven members to inquire into the nature and extent of the practice of vivisection and to inquire into the laws relative to the proper protection of scientific experiments without having unnecessary cruelty. One member of the commission must be a state senator and another an assemblyman. The bill would appropriate $10,000.

High Mortality Record.—The bulletin of the State Department of Health for the month of March shows that the number of deaths in the entire state was 14,227, which is the highest number on record; the only other months when the deaths reached 14,000 were March, 1904, and March, 1910. The excessive rate was attributed to influenza. In the first three months of the year the deaths numbered 40,000, which is greater by 1,300 than the number last year.

Must Report Births and Deaths Promptly.—Attorney General Carmody, in an opinion rendered to the State Commissioner of Health, defines the powers and duties of local boards of health and the State Department of Health in enforcing the provisions of the section of public health requiring prompt and complete reports of all births to be filed with the department each month. He states that physicians who fail to comply with this public health law may have their licenses to practice medicine revoked. Dr. Porter, in commenting on this decision, states that the attorney general has outlined clearly the responsibility resting on the local health boards and it is the intention of the State Department of Health to see that their duties are carried out. He further states that it is extremely important that the registration of vital statistics should be improved, particularly in those places which have been negligent in the past. The attention of all physicians is directed to the law as quoted and their cooperation and support are urged. The law requires that births shall be reported within thirty-six hours and deaths within twenty-four hours from the time of their occurrence.

New York City

Conviction for Sale of Wood Alcohol.—The Court of Special Sessions in the case of Domenico Locatelli, charged with violation of Section 68 (h) of the sanitary code in selling anisette containing a large proportion of wood alcohol, is said to have found the defendant guilty and sentenced him to a fine of $250 with the alternative of ninety days in jail.

Vital Statistics.—The mortality of New York City for the first three months of 1911 was 17 per 1,000, as compared with 17.45 per 1,000 for the previous year and with 18.33 per 1,000 for the corresponding periods of the previous five years. This saving of life is most in evidence in the group under five years of age, almost 70 per cent. of the salvage being in that group. The increased mortality among elderly people was due, in all probability, to the increased prevalence of influenza. The birth rate for the same period was 28.11 per 1,000, the highest ever reported for this period.

Extension of Physiology Teaching.—Plans for the extension of the work of the department of physiology of Columbia University are being carried out. Three additions to the staff have been made: Frank H. Pike of Chicago University to be assistant professor, Horatio B. Williams of Cornell to be an associate and Donald Gordon to be an instructor. Dr. Williams is spending the summer in Europe visiting laboratories and arranging for the purchase of apparatus for electrocardiographic and other work. Professor Burton-Opitz will have charge of the instruction of the medical students and Professor Pike of much of the work in general physiology. A course in clinical physiology, dealing with the application of physiologic methods to problems of clinical medicine has been established. Changes in the laboratories will be made during the present summer. The income of the George G. Wheelock Fund is to be devoted to the extension of the library. The chief professorship of physiology, held by Frederic S. Lee, has been entitled the Dalton professorship, in memory of Dr. John C. Dalton, who was in point of time the first experimental physiologist of America and gave distinguished services to the Columbia School of Medicine for thirty-five years.

Research Laboratory Extends Its Activities.—On January 1 a special division of the research laboratory of the department of health was organized under the title of "Laboratory for Special Therapy and Preventive Medicine," and while the work of this new division is still partly in the process of organization, the following special fields are now covered by the new activities of the laboratory: 1. Cerebrospinal meningitis. The production, distribution and administration of antimeningitis serum. The performance of lumbar puncture for the diagnosis of cases of suspected meningitis. 2. Trachoma and other communicable diseases. A systematic investigation of the etiology and infectiousness of these diseases with special reference to microscopic diagnosis. 3. Syphilis. A study of the Wassermann reaction as a preliminary to making this test available to physicians, hospitals and dispensaries, in cases in which the patient is unable to pay to have examination made in private laboratories. The laboratory is ready at present to receive a limited number of specimens for examination. 4. Gonorrhea. An investigation of gonorrheal vaginitis in young girls in hospitals and other institutions for children. The preparation and clinical application of vaccines for gonorrheal infections. 5. Streptococcus and pneumiococcus serums. The production of these serums and an investigation as to their clinical value. These serums will be supplied in suitable cases, where bacteriologic examinations can be made.

Buffalo

Antituberculosis Work.—The second annual report of the Buffalo Association for the Relief and Control of Tuberculosis announces that the association has neither income nor endowment, but that the sum of $3,327.14 was available for the conduct of the Day Camp from the sale of national red cross stamps. In the Day Camp there were ninety-eight admissions and of these thirty patients were able to remain both day and night at the camp. Of these patients sixteen were sent to the State Tuberculosis Hospital, Raybrook. The tuberculosis dispensary of the association was open for 357 days and during this time 746 new patients were examined. Of these 239 were of tuberculosis of the lungs, thirty of tuberculous lesions other than pulmonary. One hundred and twelve cases were suspicious and in 365 tuberculosis was not found.

NORTH CAROLINA

The State Society Meeting.—The fifty-eighth annual meeting of the Medical Society of the State of North Carolina will be held in Charlotte, June 20-22, under the presidency of Dr Chalmers M. Poole, Salisbury.

Personal.—Dr. Archibald A. Campbell, Statesville, has been elected county superintendent of health for Iredell County; Dr. J. Stevens Brown, Hendersonville, county superintendent for Henderson County; Dr. J. Rufus McCracken, Waynesville, county superintendent of health for Haywood County, and Dr. J. D. McMillan, superintendent of health for New Hanover County.——Dr. J. Ernest Dawdy has been reelected city physician of Winston-Salem.——Dr. J. Rainey Parker has been elected physician to the State Home of Orphans of the I. O. O. F., Goldsboro.

OHIO

Personal.—Dr. John D. O'Brien, pathologist of the Massillon State Hospital, has resigned to become director of the Cleveland Rest Cure Sanitarium near Strongville. He will be succeeded by Dr. Orlando D. Tatge, Massillon.——Dr. D. W. Brickley, Canal Winchester, has been appointed local surgeon for the Erie and Big Four Systems at Galion, vice Dr. Chalmers D. Morgan, Galion.——Dr. Ira J. Kail, a member of the staff of the Ohio Hospital for Epileptics, Gallipolis, has resigned and will practice in Huntington, W. Va.

Cincinnati

Personal.—At the annual election of the officers on the staff of the Cincinnati Hospital, May 26, Dr. B. Knox Rachford was elected president; Dr. Robert Carothers, vice-president, and Dr. Meyer L. Heidingsfeld, secretary.——Dr. and Mrs. Joseph Edward Pirrung left for Europe, May 31.——Dr. Simon P. Kramer has gone abroad.——Dr. William Nickels, an intern in the City Hospital, was operated on for appendicitis, May 18.

University of Cincinnati Notes.—The medical department of the university will introduce an innovation in medical teaching during the coming session. The entire senior class will spend the morning in practical work in clinical lectures and bedside instruction in the various hospitals, and lectures will be given only in the afternoons. The dispensary clinics will be attended only by the junior students.——The Board of Health of Cincinnati has decided that the equipments and resources of the departments may be utilized by the students of the university in the practical teaching of hygiene and sanitation.

PENNSYLVANIA

Leprosy in Pittsburg.—On May 24, a case of tuberculous leprosy was discovered in Pittsburg. Yee Tung, a bookkeeper in a Chinese store was taken to the Municipal Hospital and placed in a tent until a house can be erected for him.

Milk Stations Opened.—The Wyoming Valley Society for the Prevention of Tuberculosis has recently opened six stations in Wilkes-Barre and vicinity, with a trained helper in charge to teach mothers how to modify milk and in other ways properly to feed and care for babies.

Diphtheria in Pottsville.—Six rooms in the Benjamin F. Patterson Memorial School Building in Pottsville were closed by the school board May 25, all text-books and school appliances were ordered destroyed and all rooms fumigated because of diphtheria among the pupils. On May 24 a meeting was called by the council, school board and health authorities to take action because of the spread of this disease and it was decided that new sewers should be built to take the place of open ones in some parts of the town and that a sewage disposal plant should be established.

Philadelphia

Essington Hospital Opposed.—Mayor Reyburn has opposed the sale of the Lazaretto property at Essington, for sanatorium purposes, as it is likely to become a valuable part of the city's harbor. It was desired by the board of health for use of children.

New Society of Ophthalmologists.—At a meeting held May 14, the Philadelphia Polyclinic Ophthalmic Society was organized. Dr. Wendell Reber was elected president and Dr. Joseph L. McCool secretary, and Drs. William Campbell Posey, William M. Sweet and William Zentmayer were elected the executive committee.

Gifts for Jewish Charities.—At the annual meeting of the Federation of Jewish Charities of Philadelphia, on May 11, the report showed that the sum of $138,300 had been allotted to twelve charitable institutions during the fiscal year. Among the institutions receiving gifts were: Jewish Hospital Association, $32,000; Jewish Foster Home, $22,000; Jewish Maternity Association, $9,500; National Jewish Hospital for Consumptives, $3,000.

Jewish Sanatorium Report.—The second annual meeting of the Philadelphia Jewish Sanatorium for Consumptives, Eaglesville, was held at the institution, May 7. The report for the year showed that 111 patients had been admitted to the institution and 90 had been discharged. Of those treated, 80.9 per cent. had been cured. The total income for the year was $25,000. The following officers were elected: President, Louis Gerstley; vice-presidents, Dr. Isaac Leopold, J. H. Louchheim and B. E. Block; secretary, Dr. Abraham J. Cohen, and treasurer, Morris Apt.

TEXAS

New Hospital Opens.—The new hospital of the Southern Pacific System, Houston, was opened May 27.

Diploma Mill Dean Sentenced.—It has been reported that Dr. J. William Decker, dean of the diploma mill known as the Gate City Medical College, located at Dallas, Texas, has been given a penitentiary sentence for using the mails to defraud.

Lepers in Texas.—The State Health Department has had made a list of the lepers now in the state of Texas, who number 30. Of these 11 are reported married and 9 single; 10 are severe cases, 2 medium and 6 mild; 20 are said to be Americans and 2 Mexicans; 16 are male and 6 female. As to location, 11 are in Galveston, 8 in San Antonio, 3 in Dallas, 3 in Sourlake and 1 each in Liberty, High Island, Del Rio, Comfort and Austin. They vary in age from 13 to 68 years.

Desire Texas National Park.—At its recent meeting the house of delegates of the State Medical Association of Texas passed a resolution in which it stated that the Panhandle of Texas is a healthful country and that the Palo Dura Canyon is a most beautiful and wonderful natural creation worthy of national recognition and preservation, and that it was the sense of this body that the Congress of the United States should take steps toward the creation of a national park and health resort at this spot.

Personal.—Dr. Frank C. Beall has been elected secretary of the faculty of the Fort Worth University medical department, vice Dr. William R. Howard. Dr. Robert B. Grammar has been elected vice-president of the board of directors and Dr. Frank D. Gray has been elected a director, vice Dr. Ira C. Chase.——Drs. Charles C. Jones and Thomas G. Calhoun suffered severe losses in a fire in Teneha, April 29.——Dr. George H. Lee, Galveston, fractured his arm, April 19, while cranking his automobile.——Major Thomas B. Fryar, N. C., N. G., Tex., Corsicana, has been designated to attend the maneuvers on the Mexican frontier.——Dr. Robert L. Hall, Terrell, has been reelected health officer of Kaufman County.

UTAH

Personal.—Dr. Perry G. Snow has been appointed professor of anatomy in the state university, vice Dr. John Sundwall.——Dr. Charles G. Plummer, Salt Lake City, who has been seriously ill with septicemia, has recovered.——Dr. Howard P. Kirtley, Salt Lake City, has been placed in charge of the free dispensary of the Volunteers of America, Salt Lake City.

GENERAL NEWS

Sioux Valley Physicians to Meet.—The next meeting of the Sioux Valley Medical Association will be held at Sioux Falls, S. D., July 20, under the presidency of Dr. Prince E. Sawyer, Sioux City, Iowa. The membership of this society is made up of physicians from South Dakota, Minnesota, Nebraska and Iowa.

Canal Zone Sanitation.—The report of Col. William C. Gorgas, chief sanitary officer of the Isthmian Canal Commission, for March shows that there were 43 deaths from all causes among employees, of which 27 were from disease and 16 from violence, equivalent to a respective annual average death rate per thousand of 6.76 and 4. The annual average death rate per thousand for whites was 3.88 and for blacks 7.76, a substantial reduction as compared with March, 1910.

Confederate Surgeons Meet.—The annual meeting of the Association of Medical Officers of the Army and Navy of the Confederacy was held in Little Rock, Ark., May 17-18, and the following officers were elected: president, Dr. William F. Beard, Shelbyville, Ky.; vice-presidents, Drs. Carroll Kendrick, Kendrick, Miss.; John B. Bond, Little Rock, Ark.; Clarence J. Edwards, Abbeville, La.; and James D. Croom, Mexton, N. C.; and secretary and treasurer, Dr. A. Augustine Lyon, Nashville, Tenn.

Pure Water Association.—The National Association for Preventing the Pollution of Rivers and Waterways met at Johns Hopkins University, May 6. The chairman referred to Senate Bill No. 640, New York, entitled "An Act to Amend the Public Health Law in Relation to the Distribution of Sewage and Manufacturing Wastes into the Waters of the State," as a general form for a species of standard bill for uniform legislation in the various states. A committee of organization was appointed to formulate the aims and objects of the association and to draw up a plan of organization. This committee is composed of Drs. Henry M. Bracken, St. Paul, William H. Welch, Baltimore, Lt.-Col. Jefferson R. Kean, M. C., U. S. Army, and Messrs. Calvin W. Hendrick, Baltimore, and Rudolph Herring and H. de B. Parsons, New York City.

Tropical Medicine Meeting.—The eighth annual meeting of the American Society of Tropical Medicine was held in New Orleans, May 18-19, under the presidency of Dr. William S. Thayer, Baltimore. After the first morning session, luncheon was served at the refectory on the campus of Tulane University, and at the afternoon session leprosy was discussed and Dr. Charles W. Duval, New Orleans, demonstrated cultures of the *Bacillus lepræ* in his laboratory. The second morning session was devoted to pellagra, and on May 20 an excursion was taken to the leper colony at Indian Camp. The following officers were elected: president, Dr. Joseph H. White, U. S. P. H. and M.-H. Service; vice-presidents, Drs. Judson Daland, Philadelphia, and Richard P. Strong, Manila. P. I.; secretary, Dr. John M. Swan, Philadelphia; assistant secretary, Dr. Allen J. Smith, Philadelphia; treasurer, Dr. Charles Lincoln Furbush, Philadelphia; and councilors, Drs. Ramon Guiteras, New York City, and Charles C. Bass, New Orleans. A committee was appointed to arrange for a congress of tropical medicine at the Panama Exposition, consisting of the incoming president and Drs. George Dock, St. Louis, and William H. Welch, Baltimore, and S. Creighton Wellman, Oakland, Cal. It was decided that the next meeting of the society be held at the same place as the American Medical Association and on the day before that meeting.

Army Medical Corps Examinations.—The surgeon-general of the army announces that preliminary examinations for the appointment of first lieutenants in the army medical corps will be held July 10, and September 5, at points to be hereafter designated. Full information concerning these examinations can be procured on application to the "Surgeon-General, U. S. Army, Washington, D. C." The essential requirements to securing an invitation are that the applicant shall be between 22 and 30 years of age, a citizen of the United States, a graduate of a medical school legally authorized to confer the degree of doctor of medicine, of good moral character and habits, and shall have had at least one year's hospital training, after graduation. The examinations will be held concurrently throughout the country at points where boards can be convened. Due consideration will be given to localities from which applications are received in order to lessen the traveling expenses of applicants as much as possible. The examination in subjects of general education (mathematics, geography, history, general literature and Latin) may be omitted in the case of applicants holding diplomas from reputable literary or scientific colleges, normal schools or high schools, or graduates of medical schools which require an entrance examination satisfactory to the faculty of the Army Medical School. In order to perfect all necessary arrangements for the examination, applications must be complete and in possession of the adjutant general at least three weeks before the date of examination. Early attention is therefore enjoined on all intending applicants. There are at present sixty-one vacancies in the medical corps of the army.

FOREIGN NEWS

Tribute to Aged Physician at Nice.—The Italian *Policlinico* states that there is an endowment at Nice for bestowing small prizes annually on persons who have distinguished themselves particularly in "works of kindness and charity." Among the recipients at the recent distribution of the prizes last month was Count G. Naldi, dean of the physicians at Nice, aged 91.

Date of International Dermatologic Congress.—We are informed from Rome that the date of the International Dermatologic Congress, which is to convene at Rome this fall, has been advanced one week, so that the opening day will be September 18. The secretary general is Dr. G. Ciarrocchi, 5 Piazza Grazioli, Rome.

Metchnikoff Goes to Southern Russia to Study the Plague.—The plague has been endemic in Astrakhan for some months although it seems to have been kept under comparative control. The cable states now that Metchnikoff has gone to this point to study how the bacilli of the plague live during the summer when the plague disappears and whether they are the guests of certain animals or are carried over from season to season in attenuated human cases. Until these questions are answered, he says, it will be impossible to control the plague effectually.

Biennial Gathering of Spanish Obstetricians.—The meeting convened at Madrid April 28 and the royal palace was thrown open to the members for a reception, the king and queen taking a special interest in this branch of medical science. During the meeting by-laws were adopted founding a national association for obstetrics, gynecology and pediatrics, of which Dr. Fargas was elected president and was tendered a banquet. The occasion was hailed as an onward stride in the "movement for collective fraternity between the members of the medical profession." Dr. Fargas is professor of gynecology at the university of Barcelona.

LONDON LETTER

(From Our Regular Correspondent)

London, May 20, 1911.

Great State Insurance Scheme Against Illness and Unemployment

Before a crowded and sympathetic House of Commons Mr. Lloyd-George, Chancellor of the Exchequer, introduced a bill "to provide for insurance against loss of health and for the prevention and cure of sickness and for insurance against unemployment." This bill, which has been promised for some time, is the most important of all the measures of "social reform" to which the government is pledged and far surpasses any form of state insurance in existence, including the German scheme of Prince Bismarck, on which it has been to some extent modeled. The main difference is that the latter does not insure against unemployment. At present only a small proportion of the workers (about 6,000,000) are insured against illness (by the friendly and other societies) and an insignificant portion against unemployment. Those who stand most in need of insurance make up the bulk of the uninsured, for the reason that they cannot afford to pay for it. Indeed, about a quarter of a million of policies lapse every year because the insured cannot keep up their payments. In the German scheme the workman contributes according to his wages from 7 to 20 cents a week and the benefits vary accordingly. But the benefits of the lower class are too small for this country and it has been decided to establish one scale of benefits for all classes, though the contributions are reduced for those earning low wages. The contributions will be 8 cents a week for men and 6 cents for women, but men who earn less than $4 a week will pay only 6 cents and those earning $3 or less 4 cents; while women who earn only $2 will pay 2 cents. The cost of the insurance will be provided from three sources—contributions from the workers, the employers and the state. An employer will pay 6 cents a week for each employee and the state will pay 8 cents, but in the case of workmen earning the lower wages mentioned above the employer must also provide the deficiency in the workman's contributions.

The reason given is that he profits by the cheap labor, but Mr. Lloyd-George appears to have ignored the economic fact that low wages do not necessarily mean cheap labor. Insurance will be compulsory for all employees whose incomes are below the income tax level ($800 a year). There will also be a voluntary section for those who are not working for an employer but are engaged in some regular occupation and are mainly dependent on their earnings for a livelihood, such as the village blacksmith. It is anticipated that there will be 9,200,000 men and 3,900,000 women in the compulsory class and 600,000 men and 300,000 women in the voluntary class.

MEDICAL BENEFITS

The benefits include medical attendance in illness. At present when a workman falls ill he runs up a bill with a doctor which he tries to pay, with his other bills, when he recovers, but often he is unable to pay. Under the insurance scheme the payment of the doctor is thus guaranteed. It is thought that this will lead to a great improvement in the doctoring of poor people. In the friendly societies physicians are paid a capitation fee of $1 per annum for attendance and medicine in case of illness, but this is not considered by the profession sufficient and quarrels are always taking place with the societies. It is contended that proper attention and expensive drugs cannot be provided for the money. In the state insurance scheme it is proposed to pay the physician more than the friendly societies have done, but the amount has not been fixed.

Another new departure is that the prescribing of drugs is to be separated from dispensing of them. The medicines will be dispensed by pharmacists, with whom an arrangement will be made. The object is that there shall be no inducement to the doctor to withhold expensive drugs should they be required. For women there will be a benefit of $7.50 in maternity cases to cover nursing and medical attendance. Another branch of medical benefit is assistance to the anti-tuberculosis campaign. There are about 500,000 persons suffering from tuberculosis, which causes a great burden on the friendly societies. Between the ages of 14 and 55 one out of every three deaths is due to tuberculosis. At present there are only 4,000 beds in the sanatoriums for tuberculosis—a totally inadequate number. From the insurance fund $7,500,000 will be set aside for the purpose of building sanatoriums. For their maintenance a contribution of 24 cents for every insured person will be made, and in addition the state will contribute 8 cents. This will amount to about $5,000,000 a year. The sick allowance for insured persons will be $2.50 a week for three months, and after that $1.25 for another three months, but in the case of tuberculosis $2.50 will be paid for the whole six months. If a man is broken down altogether there will be a permanent disablement allowance of $1.25 as long as he is unable to earn a living in any way. For women the allowance will be $2 for the first three months and $1.25 afterward. If illness is due to a man's misconduct he will receive no sickness allowance, but will be entitled to medical treatment. Persons under the age of 16 will receive no sick pay, but will get the benefit of medical attendance. As in the German scheme, the funds will be collected by means of stamps on a card given to the workman.

PREVENTION OF MALINGERING

In the distribution of the benefits it is proposed to make use as far as possible of the well-organized and well-managed friendly societies. There will be a real check on malingering. Physicians' certificates are considered no check, but the members of a society naturally object to being swindled and will, as formerly, act as a check. The residue of the men who do not belong to a society will be collected in a body called the post-office contributors. As most of them will be uninsurable lives they will not be paid the same benefits as in friendly societies, but they will be a dwindling body, for in future men will enter the insurance scheme at the age of 16, before they have developed any serious disease. At present there will be an age limit of 45 years at which men can join the scheme at the ordinary rates; above this age they must pay increased contribution.

With regard to the finance of the bill it is estimated that within the first year the sum paid by all classes of contributors will amount to nearly $100,000,000, of which the employers will contribute $45,000,000 and the employees $55,000,000. The cost to the state will be about $23,000,000.

As stated, the entirely new feature of the bill is insurance against unemployment. On the Continent of Europe attempts have been made to do this, but they have been mostly failures because they are on the voluntary system. It has been decided that this insurance must be on a trade basis, because unemployment fluctuates according to trade. A beginning will be made with the more precarious trades—the engineering and building. Here there is not the same basis for actuarial calculation as in sickness and the proposals are therefore tentative. It is proposed that the workman and the employer will each pay 5 cents a week and that the state will pay a fourth of the total cost. There will be an abatement for employers who pay for their workmen by the year, which is an encouragement to constant employment and a discouragement to casual. Payment will not be made to a workman who is dismissed for misconduct or who is out of work through a strike or lockout. Relief will be given for unemployment due to fluctuation in trade. Two dollars a week will be paid, but no man can draw more than one week's pay for five weeks' contribution, so that a real loafer will drop out. This scheme will apply to 2,400,000 workmen.

No scheme such as this has ever been previously attempted. It appeals to the imagination of everyone and seems to have been received at first with unanimous approval and even enthusiasm by the whole press of the country, which includes Mr. Lloyd-George's most bitter opponents. It is the most far-reaching and deep-reaching project of social legislation ever atempted in any country, democratic or other.

CONSEQUENCES TO THE PROFESSION

As to its bearing on the medical profession, this bill is fraught with such grave consequences that it has aroused wide-spread apprehension. It involves the converting into contract practice of the treatment of all persons employed for a wage between the ages of 16 and 65 whose income is below $800. This comprises the greater part of the male population of the country and a considerable number of females. It is estimated that the total number of persons involved constitutes several million—the whole of the working class and a considerable portion of the lower middle class. There are very few doctors whose practice does not consist largely of this element of the population and many whose practice consists almost entirely of it. All that remains to them of private practice is the children below the age of 16 and the women, married or otherwise engaged, who do not work for a wage. Now contract practice has never been regarded with favor by the profession, and disputes are always occurring with the friendly societies in consequence of the low rate of remuneration.

The profession, both individually and through its various organizations, is showing great activity. The Royal College of Surgeons has petitioned the government to delay the medical provisions of the bill for a year, a committee of the British Medical Association has interviewed Mr. Lloyd-George, chancellor of the exchequer, on the subject. Special meetings of the divisions of the association have been called to consider the bill. While the physicians admit the value of the bill in regard to the benefits it confers on the working classes, they think that if it does not receive important modifications it will inflict irreparable damage on the profession. Mr. Lloyd-George has given personal assurances to the medical press with regard to the capitation payment. He has provided an annual sum of $21,000,000 for the provision of medical attendance, including drugs, dressings and appliances. The calculation is that this will permit a capitation fee for the doctors of $1.50 per head for each person insured. The amount will be increased on the advice of the central insurance office in districts where sickness is excessive. Moreover, the sum of $5,000,000 will be provided annually for the maintenance of sanatoriums, thus removing from the scope of domiciliary treatment phthisical patients who would otherwise make serious calls on the sum available for domiciliary medical attendance. The capitation payment of $1.50 so far is satisfactory, as the ordinary capitation grant of the friendly societies is only $1. However, there are several counterbalancing elements. Members of the friendly societies undergo medical examination before admission and therefore are physically selected. Under the bill all will be eligible. Again, in the friendly societies members are not entitled to attendance if the illness is due to their own misconduct: under the bill they are.

A great evil in connection with the contract practice of the friendly societies is that it places the doctor under the control of a body of ignorant and narrow-minded persons. To this the profession has objected quite as much as to the rate of remuneration. The wide-spread extension of this tyranny under the bill is viewed with dismay. From the standpoint of the workman it is also an evil that he should be deprived of all choice and compelled to accept the services of a particular doctor. In France and Germany, where under the insur-

ance scheme doctors are under *the control* of committees consisting of employers and employees, this compulsion has aroused great dissatisfaction. It is strongly felt by the profession here that in the interests of the physician as well as of the workman free choice should be allowed. Mr. Lloyd-George has recognized the *desirability* of this and looks favorably on the institution of a wide panel of local doctors willing to serve.

A calculation has been made as to the effects of the bill on the incomes of doctors. There are 30,000 physicians in the country. The number *of persons in receipt* of *incomes* over $800 (the limit of income above which the bill does not apply) is 596,380. This allows, in round *numbers*, twenty per doctor. Taking $50 as the average expenditure per family *for medical attendance this* allows each doctor $1,000. If the remainder of the population pay at the capitation rate of $1.50 the pay received for them would be $1,800 per doctor per annum. In addition an average of $250 can be put down for appointments *to* infirmaries, schools, etc. The total is $3,050. For this the *country doctor may* have *to travel as* much as 10,000 *miles* in the year, a remuneration *of about 30 cents* per mile, the same as a job master gets for a horse and trap and an uneducated *man* to drive. Nothing is allowed for medical skill or knowledge or the interest *on* capital expended.

PARIS LETTER

(*From Our Regular Correspondent*)

PARIS, May 12, 1911.

Physicians and Classical Studies

For some years there has been a continually *increasing* tendency to sacrifice the studies of Latin and Greek in secondary instruction in France. This tendency has called forth strong protest from the medical profession. The Société médicale du XIV-e arrondissement de Paris has just passed a resolution requesting all medical organizations to make a *unanimous stand to* preserve the traditions of classic *culture* on which the dignity and the authority of a physician depends.

Unforeseen Consequence of Prosecution for Illegal Practice of Medicine

The Syndicat médicale de Dunkerque has just prosecuted for illegal practice of medicine a woman practicing midwifery who carried puerperal fever. As the government could not be persuaded to take the initial action, the *syndicat* undertook it as civil party, and the woman was condemned. The outcome was very curious. The woman was insolvent and the government refused to imprison the woman, on the pretext that she was old, although the *syndicat* offered to pay the expenses of her maintenance in prison. The *syndicat* was therefore obliged to pay the expenses of the prosecution ($46, or 230 francs), and the result was *nil*, for the woman continued to practice her calling in defiance of the judgment which inflicted no punishment. It would seem desirable to have such a carrier of *infection prosecuted for manslaughter* by the family of the victim; a severe prison sentence would certainly be obtained.

Use of Copper Pipes to Distribute Drinking-Water

The Council of Public Hygiene and Salubrity of the Seine has just been called on to pronounce with regard to the harmfulness or otherwise of use of copper pipes for drinking-water. Dr. Armand Gautier, professor of chemistry at the Faculté de médecine, who was charged with the investigation, concludes, and the council agrees with him, that the substitution of pipes of red copper for ordinary lead pipes has no disadvantages. The experiments made by Toussaint, Burq and Galippe, on themselves and others, and repeated by M. Gautier, have shown that food, even acid food, may be safely eaten, even though it may have cooled in untinned copper vessels, and that such vessels may be used in the kitchen without danger.

Reconstruction of the Hôtel-Dieu of Lyons

M. Herriot, mayor of Lyons, has just laid before the Académie de médecine the plans for the new hospital which the city of Lyons proposes to build. There are to be 1,300 beds. All the university clinics are to be transferred thither. The following principles are to be carried out: isolation of pavilions; separation of the septic and aseptic cases in the surgical service; numerous isolation chambers in each service for dying and noisy patients, etc.; annexes (dining-rooms, rest rooms, open-air galleries, etc.); modern *installations* for application of the recent methods in treatment (*mechanotherapy*, physiotherapy, hydrotherapy, permanent baths, etc). The hospital will occupy about 40 acres (16 hectares).

BERLIN LETTER

(*From Our Regular Correspondent*)

BERLIN, May 11, 191

Personal

Professor Filehne, director of the *pharmacologic* instit at Breslau, has resigned his position.

Prof. Heinrich Braun, director of the university surgi clinic at Göttingen, died suddenly May 9, from heart dise at the age of 64. He received his anatomic and physiolo training at the University *of Giessen, and in 1874* devo himself to surgery, being assistant until 1884 at the surgi clinic and policlinic at *Heidelberg. In 1873* he joined faculty and in 1878 he became professor extraordinary. 1884 he was *called to Jena* as *regular professor*, and fr there in 1888 to Marburg. In 1890 he went to Königsb and *from* there to Göttingen. He has produced a large nu ber of articles on the *most* various topics in surgery.

Annual Meeting of German Medical Association

This year's session of the German medical league (*Deutscl Aerztetag*) will occur at Stuttgart, June 23 and 24. transactions are likely to attract especial attention, for t important question is to be *discussed as to* what *attitude* t German medical professional organization, the *Aerztevereii bund*, will *take* toward the new imperial insurance law. The is no doubt that the law will be adopted in the form which it has been returned by the committee, and that t essential demands of the medical profession will not be co plied with. The *Aerztevereinsbund* passed *a* resolution t years ago that the German medical profession would *not* satisfied with the *imperial insurance law unless the deman formulated* by the association were *incorporated into the la* in their entirety and without modification, and that in ca *this* was not done the physicians *would* proceed to *help the* selves. This self-help, however, can only result in an imped *ment to the* execution of the law and there is no *question* b that the extension of the social insurance *contemplated* the legislature will be largely *nullified* by such opposition. *can only* be surmised what steps the government will take meet such an opposition to a law which it has sanctione *It may* be regarded as beyond *question* that the *governme* will undertake to overcome the resistance of the physician *From* all this it is *easily* seen *how* serious *a situation* co fronts the German medical profession. It will require t greatest circumspection on the part of their leaders *to avoi* bringing on a conflict which will lead *to a marked deteriora* tion in the *economic* conditions of German physicians an which possibly may finally end in defeat.

International Exposition of Hygiene in Dresden

The international exposition of hygiene at Dresden wa ceremonially opened in the presence of the king of Saxony o May 6. *Although* as is *the rule* with exhibitions all the *preparations are not yet completed*, it is the general impression of those who have so far visited the exposition that the arrangements are *remarkably* well *adapted to the instruction* of the public and the advancement of public and private hygiene.

Twenty-Eighth Congress for Internal Medicine

As usual the congress for this year on internal medicine met at Wiesbaden in *the latter part* of April. The *president* was Professor Krehl, the Heidelberg clinician. As a result of the rule adopted *last* year and a strict business *administration*, it was possible in the four daily sessions to dispose of nearly 100 papers. Each speaker was limited to twelve minutes and each participant in the discussion to five minutes, except the addresses on the *first* day to which were allowed forty minutes each.

THE DIATHESES

The chief topic on the order of the day was "The Diatheses." The addresses were by the Berlin clinician, Professor His; the Munich pediatrist, Professor Pfaundler, and the Basel dermatologist, Privat-docent Bloch. The object was to present the established facts and a criticism of the views, especially prevalent in France, regarding this general pathologic conception, which is still regarded with a good deal of skepticism in Germany. His considered the history of opinion on this subject and discussed diatheses *in internal medicine*, saying that clinical experience compels us to recognize a relationship between certain groups of diseases apparently completely separated, *and* suggests a special pathologic basis for them. Gout, diabetes and obesity stand in a mutual *relationship to* each other. We see that they appear *in individuals and often* in families, either simultaneously or *successively*, *and often* also in connection with arteriosclerosis, contracted kidney, calculus formation, skin diseases, disturbances of digestion, migraine and other nervous affections. There are always constitutional disturbances. As a rule, a hereditary predisposition is evident. Their prominent symptoms seldom exhibit themselves before the second or third decade, as they remain latent until that time. Still this latency is only apparent, for already in early childhood we notice prodromal symptoms and it is possible to make a prognosis in regard to certain parents on the basis of the health conditions of their offspring, especially abnormal tendencies to fat accumulation or emaciation, enuresis, nervous pain, inclination to frequent vomiting or to frequent fever or catarrhs of the respiratory and digestive apparatus. With puberty some symptoms become less prominent and others come to the front. In later life, obesity, diabetes or gout appear. Among the French, for as much as fifty years, such a predisposition has been recognized and called "arthritism" or the "arthritic diathesis." Among the Germans, during this period, clinical research has taken a different direction, while the French have retained more sympathy with ancient medicine. His reviewed the history of medicine from the time of Galen and showed how even when pathologic anatomy was flourishing, clinicians were still endeavoring to satisfy themselves with single clinical pictures as constitutional. Then pediatrics furnished new material and dermatology added to it. In Germany the idea of constitutional tendencies was revived especially through the efforts of O. Rosenbach, who called attention to the necessity of taking the functional disturbances into consideration in addition to the anatomic changes. The theory was further developed by F. Kraus and it was placed on a theoretically very acceptable basis by Martius of Rostock. His remarked in conclusion that we must depend especially on chemical investigation for the actual explanation.

DIATHESES IN CHILDREN

Professor Pfaundler discussed diatheses in pediatrics. By diathesis is meant a preparation for disease, a readiness for the appearance of certain diseases and groups of diseases. The presence of such predisposition is observed with especial clearness in children, for certain children sicken more readily than is to be expected from their age and character, although they are living under the same conditions as other children. The short period of time between birth and the appearance of the disease makes possible also a good supervision and the exclusion of diseases depending on external influences. The first children's disease which gave occasion for pondering this theme is scrofula, for the occurrence of which we now regard two elements as necessary, constitution and infection. We see that the tubercle bacillus alone cannot produce scrofula; the infection must attack an organism of a certain character which has been termed by Czerny, of Strasburg, the exudative diathesis. In addition to scrofula or the exudative diathesis there is an entire series of diathetic predispositions among children, such as the condition which we designate as the *status thymicolymphaticus*, infantile arthritism, and others. We recognize the condition of myxedema in which a series of lesions occur among which that of the thyroid gland is to be regarded as central. So the combinations of disease phenomena which interest us are relatively clear. One thing is quite striking: these combinations in certain cases affect especially the organs derived from the mesenchyma, the nonepithelial portions of the mesoderm. A whole series of questions are suggested by this fact: To what extent is the predisposition congenital? Did it first develop in the uterus or did it have its origin in the parental germ, or is it a genuinely inherited predisposition arising from injury to the germinal tissue affecting a long series of ancestors? Research on these questions is still scarcely blocked out. Pfaundler's assistants have collected data in regard to the health of the brothers and sisters of children with these diatheses and those of healthy children with the result that diathetic predispositions were found in the former six times as often as in the latter. But it is difficult to collect similar data in regard to the parents, and quite impossible in regard to the grandparents in consequence of our hitherto faulty genealogic investigations. The great variability and the multiplicity of the grouping of the individual elements indicating diathetic predisposition are remarkable. With reference to this, Pfaundler has constructed a series of tables based on numerous investigations. Further explanations may be expected from functional tests, such as those instituted in Berlin by Finkelstein on the tolerance of nourishment.

DIATHESES IN DERMATOLOGY

The last speaker, Bloch, dealt with diatheses in dermatology. A large number of diseases are observable at various periods of life which must be regarded not as simple organic diseases, but as the expression of a common constitution. Some help to the understanding of these may probably be obtained by the investigations on chemical allergy or anaphylaxis and the behavior of the organism toward foreign albumins. It is now known that in many cases a foreign albumin may provoke severe symptoms of poisoning and some of these have a striking similarity to those observed in diatheses.

THERAPEUTICS IN THE DIATHESES

Mendelssohn, of Paris, gave an account of the present status of the arthritism question in France and Armstrong, of London, reported on the radium treatment of metabolic diseases. He expressed doubt with reference to the permanency of the asserted successes. Linser, of Tübingen, has cured a number of skin diseases, which may be classed as of the diathetic type, by means of injection of normal human blood serum. Pick, of Prague, endeavored to find some connection between the phenomena under discussion and the law of heredity. Starting with Mendel's law of heredity, he shows apparently a regular occurrence of certain distinguishing characters in the family genealogic trees. Finally, O. Hansen, of Christiania, reported the success of treatment of severe blood diseases with serum. A number of speakers described the production of diathetic symptoms by the action of certain chemicals. Reicher, of Berlin, has been able in diabetic patients of a certain class to reduce the quantity of sugar in the blood to one-half by the use of radium emanations, while in patients of another class the method was not successful. These are, however, only experimental findings from which as yet no conclusions as to therapy can be drawn. Kraft, of the *Weisser Hirsch* sanatorium, commented on the extent to which the preference of a meat diet over a vegetable diet leads to the reduction of the amount of salts in the body.

OATMEAL IN DIABETES

From the mass of other articles we can only note briefly a few of the most interesting. Professor Magnus-Levy of Berlin believes that the oatmeal cure in diabetes depends on a peculiar substance in the oat starch not yet more definitely characterized. This view was opposed by many of the speakers in the discussion, while others sustained it, but the value of the oatmeal cure itself was recognized for the most part.

ASTHMA

Stäubli, of St. Moritz and Basel, described the influence of the high altitude on asthma. He remarked that for the production of asthma various factors still partly unknown are responsible and the same is true with the influence of therapy. The mountain climate has long been recognized as a remedy which acts more favorably with younger patients. It is worthy of note that the action does not run parallel with the increase in height; in individual cases extreme heights are serviceable, but this is often not the case as, for instance, Davos with its fifteen hundred meters (5,000 feet) is too high, while a few hundred meters lower the asthma attacks disappear. A permanent cure is not always obtained but the general invigoration of the body by the long freedom from the attacks is of importance. The speaker also made some interesting statements regarding the unusual prevalence of asthma in certain families, but he does not consider the danger of inheritance of the disease as great enough to constitute a reason for advising an asthmatic patient not to marry.

PREDISPOSITION OF THE APICES TO TUBERCULOSIS

New light is shed on the question as to why the apices of the lungs are first attacked in tuberculosis by some experiments of Bacmeister, of Freiburg. Some years ago, W. A. Freund called attention to the fact that persons with so-called phthisical chests, generally from early youth, presented chests which were narrow and incapable of expansion in the upper part, chiefly because of insufficient mobility of the first rib. Notwithstanding the great extent of experimentation on animals and the countless numbers of guinea-pigs, rabbits, etc., which have been made artificially tuberculous, it has hitherto not been possible to produce experimentally a tuberculosis of the lung apices. Bacmeister passed a wire around the first rib in young rabbits with the result that the growth of the upper part of the chest was retarded relatively to the general growth and the lungs showed conditions quite similar to the habitus phthisicus in man. These rabbits were then infected artificially with tubercle bacilli, both by way of the blood channels and by inhalation. The latter experiments gave no result but the former produced a quite typical tuberculous affection of the apices of the lungs. Thus the affection of the apices followed after the glands first acted on had been infected.

CURATIVE INFLUENCES ON TUBERCULOUS LUNGS

Koeniger, of Erlangen, believes that he has established as the result of numerous observations the fact that tuberculous pleurisy, which not infrequently occurs as a complication of pulmonary tuberculosis, often exercises a favorable influence on this disease. This influence is to be referred partially to the fact that the lung at the affected point is compressed and kept quiet, but also to the fact of chemical action from the pleurisy. Bruns, of Marburg, has succeeded in immobilizing individual parts of the lung for therapeutic purposes by a new process. The former Marburg clinician, Brauer, obtained very good curative results in severe tuberculous processes by induced pneumothorax, filling the pleural cavity of the affected side with gas to such an extent that the lungs were prevented from movement and partly compressed so that the wound surfaces were in contact and cicatrization could thus take place. Further experiments have now also shown that by interrupting the circulation in part of the lung pathologic processes can be influenced; practically success was achieved in so-called bronchiectasis by ligation of the artery supplying a part of the lung. The supply of blood and oxygen gradually ceased and the affected region of the lung dried up. But tubercle bacilli depend on moisture for their development.

APPENDICITIS

Fischler, of Heidelberg, described disturbances of the large intestine which occur in the neighborhood of the appendix and may present the picture of appendicitis. Such are hypertrophy of the cecum and mobility of this portion of the intestines accompanied by symptoms, chronic catarrh of the mucous membrane and similar conditions. In these cases operation can be of no service but only appropriate dietetic and medical treatment. Professor Krehl, of Heidelberg, concludes from these observations that the time must soon come when our views in regard to appendicitis must undergo revision. In the first place the aim should be to develop finer diagnostic methods.

TEST FOR PANCREAS SUFFICIENCY

Winternitz, of Halle, has been seeking for methods of forming a judgment as to the activity of the pancreas. After thorough experiments he has found that a complicated compound of iodin, iodobehenic acid, is split into its constituents only by the juice of the pancreas, so that on the administration of iodobehen, the appearance of iodin in the urine and the amount excreted permit a conclusion as to the functional activity of the pancreas.

BILE IN THERAPEUTICS

Singer, of Vienna, reports experimental and clinical investigation which he has instituted in conjunction with Glaessner on the laxative action of the biliary acids. They could demonstrate a noteworthy function of the bile in promoting the peristalsis of the colon by injecting bile into the rectum of dogs and afterward also in man. These injections gave a prompt and thorough evacuation in from ten minutes to one-half an hour. Cholic acid was isolated as the active agent, which was effective in the form of suppositories and enemata. The chief seat of this action is in the colon.

THE RÔLE OF THE SPLEEN IN DIGESTION

The investigations of Prym, of Bonn, on the part taken by the spleen in the work of digestion are worthy of notice. He investigated the question whether the spleen has the influence which has been formerly claimed on the excretion of pepsin in the stomach. For this purpose he instituted a large number of animal experiments, in part of which he removed the spleen entirely and in part he inserted it under exact control beneath the skin of dogs. He reached the conclusion that the excretion of pepsin is independent of the spleen.

BLOOD-PRESSURE IN NEPHRITIS

Bittorf, of Breslau, allowed oil to flow into the renal artery and obtained thereby a marked rise of blood-pressure. From this he concludes that in nephritis mechanical obstruction in the small branches of the artery is the cause of the increased blood-pressure.

MECHANICAL PREDISPOSITION OF PARTS OF LUNG TO DISEASE

Engel, of Düsseldorf, gave a mechanical explanation for the fact that in infants pneumonia affects as a rule quite definite parts of the lung. The peculiar conditions of childhood occasion in the position of the ribs the existence of impressions on the lung tissue in which the lung is not so well supplied with blood and air as in other places. Inflammation of the lung begins quite regularly at these points, and it is remarkable that on the right side the corresponding places are in the apices, from which the inflammation gradually spreads downward; on the left they are the parts of the lower lobe in the neighborhood of the spinal column. Probably these inflammations in the child also afford an explanation of the fact that in the adult the first signs of pulmonary tuberculosis appear at the right apex.

NATURE OF GOUT

Gudzent, of Berlin, discussed the two forms of uric acid, one of which is not affected by our therapeutic measures to date. Investigations must now be made as to how far this form of the acid is responsible for the occurrence of gout. According to his results, probably the whole of our previous views regarding gout must undergo a revision.

SALVARSAN AND THE NERVOUS SYSTEM

Schreiber, of Magdeburg, described some nervous affections observed in the course of salvarsan treatment, and discussed the question whether these symptoms were due to the action of salvarsan or of the syphilis. So far, he says, no case has been learned of in which a toxic action of the remedy on the nerves could be demonstrated. In a case of arsenic poisoning often cited in this connection, the patient had previously been treated with various other arsenic preparations recognized as dangerous. In all the cases the disturbances were recurring manifestations of the syphilis which had been only apparently cured. The negative Wassermann reaction is no evidence against this conclusion in these cases. In forty patients it was possible to obtain a positive reaction with the cerebrospinal fluid while the test with the blood gave negative results. For early cases Schreiber recommends treatment with salvarsan as early as possible, then a course with mercury, and again a treatment with salvarsan.

EGYPT AS A HEALTH RESORT

Schieffer, of St. Blasien, places a very low estimate on the curative action of a stay in Egypt. In many respects he regards the climate of Egypt as injurious. Especially he recommends that before the trip the physical condition of the patient shall be very carefully investigated, for only the milder renal and pulmonary diseases can be favorably influenced. A physician who had practiced for many years in the desert stated that only of late years had there been opportunity to make scientific examinations on the spot. In part, to be sure, they had had favorable results. Professor Krehl emphasized the importance of most careful clinical histories; so far he knows of not a single case in which a serious disease of the kidney has recovered in Egypt in which, in all probability, a cure might not also have been secured at home. Many a patient often spends his last dollars for a health trip to Egypt, but the physician must in the first place assume the responsibility of determining in such cases whether the patient shall make such a sacrifice.

VIENNA LETTER

(From Our Regular Correspondent)

VIENNA, May 9, 1911.

Bismuth Paste Praised

At a recent meeting of the Vienna Gesellschaft der Aerzte, the method of using bismuth paste in treatment of certain surgical diseases was discussed, and the originator of this method, Dr. Beck of Chicago was present at the symposium. He was welcomed by the president and took part in the discussion, in which all authors were unanimous on the merits of the bismuth paste, especially for treating fistulas and obstinate sinuses.

Eligibility of Foreign Members to the Vienna Laryngologic Society

The Vienna Laryngologic Society decided at its last meeting to change its name to the Austrian Laryngologic and Rhinologic Society (Oesterreichische Laryngo-Rhinologische Gesellschaft), and to permit its members to domicile themselves in any place of the world. Hitherto, ordinary members could not continue their membership if they left Vienna, and therefore a good many eminent specialists had to be refused admission. There is in nearly every important town of this empire at least one fully qualified rhinolaryngologist, who is now made eligible. Also foreign specialists, including German, French and American doctors, may now become members of the society, whose president now is Professor Chiari, head of the throat clinic of the Vienna General Hospital.

The Problem of Sexual Teaching in Schools

One subject has received much attention lately in our public and scientific press, which hitherto had been kept in the background from moral and other reasons—the enlightenment of children on the facts of propagation of life of animals and human beings. The realistic tendencies of modern times have drawn even the children into the whirlpool of these ideas and the necessity that girls especially should understand what it is impossible to hide from them has been a side issue of the movement termed "eradication of sexual diseases." Some years ago, the students on entering the university for the first time were handed a leaflet containing, in clear and instructive language, warnings against imprudence in sexual intercourse, and explaining the evils and dangers of gonorrhea and syphilis, both to the affected subject and to the offspring or wife. The next step was the instruction of the student before entering the university. In the higher classes of the preparatory schools, in which the pupils were between 16 and 18 years old, the teaching of anatomy gave a good opportunity for scientific instruction on this point. Such instruction was introduced into the gymnasia (schools equivalent to the preparatory schools) three years ago. Now, a group of teachers want the enlightenment on sexual problems to be given also to that vast number of children who leave school at the age of 14 and receive no further education thereafter. They justly point out that this class is more in need of knowledge on this subject, because from it the largest number of wage-earners are drawn, and because they are most subject to the dangers which threaten the ignorant. As an experiment, it has been decided to hand over the instruction on sexual subjects to the physician visiting certain schools, and it is left to his discretion to select the right moment for it. As a matter of fact, many teachers assert that in our country nearly all children at 14 know the leading facts of sexual matters. But the way they get their knowledge is often so demoralizing that a continuation of the present conditions must be prevented.

Marriages

Herman David Andrews, M.D., Buffalo, N. Y., to Mrs. Annie Lake Bird, at Niagara Falls., Ont., May 5.

Alexander E. Wrench, M.D., Montclair, N. J., to Miss Henrietta Bernasch of Brooklyn, May 10.

John W. Bronaugh, M.D., to Miss Ada Knox, both of Morinda, Okla., at Windsor, Mo., May 8.

Carmotte Ashley Cobb, M.D., to Mrs. Katharine Ogden Peck, both of Beaumont, Tex., May 3.

Frank W. Kidder, M.D., to Miss Irene Bonham, both of Los Angeles, Cal., May 10.

Deaths

Stanford Emerson Chaillé, M.D. dean of the faculty of Tulane Medical College; notable as a sanitarian, medical organizer and teacher; died at his home in New Orleans, May 27, from disease of the bladder, aged 80. He was born in Natchez; was graduated from the University of Louisiana, now Tulane University, 1853, and, after three years' study in Europe, returned and resumed his connection with his alma mater as demonstrator of anatomy, filling this position from 1858 to 1868, with the exception of three years during which he was surgeon and medical inspector in the Confederate service. From 1868 to 1908 he was professor of physiology, pathology, anatomy and hygiene in Tulane University, and from 1885 to 1908 was dean of the faculty. After fifty years' service, he retired in 1908 from active work in the college and was made emeritus professor and his golden jubilee was made the occasion of a notable celebration by the university. He was a member of the American Medical Association, American Public Health Association, and an honorary member of the College of Physicians of Philadelphia, and the Medical and Chirurgical Faculty of Maryland. Dr. Chaillé was a member and secretary of a commission appointed by congress in 1878 to investigate the cause of yellow fever, in the following year was one of the members and president of the Havana Yellow Fever Commission, and from 1885 to 1893 served as one of the seven civilian members of the National Board of Health. From 1857 to 1868 Dr. Chaillé was co-editor and proprietor of the *New Orleans Medical and Surgical Journal.* He was a voluminous contributor to the medical literature. Chief among his published works is that on "Origin and Progress of Medical Jurisprudence."

William Alfred Burgess, M.D. New York University, New York City, 1888; a member of the American Medical Association, and Association of Military Surgeons of the United States; first vice-president of the Wyoming State Medical Association; colonel and surgeon-general N. G., Wyo.; health officer of Cheyenne; a member of the local pension examining board; visiting surgeon to St. John's Hospital and attending surgeon to the Cheyenne Private Hospital; died at his home in Cheyenne, May 15, aged 46.

Verge Eugene Sweazey, M.D. University of Pennsylvania, Philadelphia, 1900; Army Medical School, Washington, 1902; who entered the medical corps of the army as lieutenant in July, 1901; and was retired with the rank of major, Dec. 27, 1910, on account of disability incident to service; died in Pasadena, Cal., April 16, from nephritis, aged 36.

William Appleton Rust, M.D. New York University, New York City, 1846; for ten years a member of the Boston School Committee; at one time a member of the Massachusetts legislature; a trustee of the Boston City Hospital and vice-president of the Boston Penny Savings Bank; died at his home in Brookline, Mass., May 15, from pneumonia, aged 87.

Horace Coleman, M.D. Medical College of Ohio, Cincinnati, 1849; surgeon of the 147th Ohio Volunteer Infantry during the Civil War; later a member of the local pension examining board of Troy, O., and an alderman of that city; for several years a resident of Washington, D. C.; died at his home in that city, May 12, from senile debility, aged 86.

William Frederick Gay, M.D. Tufts Medical School, Boston, 1899; professor of gynecology in the College of Physicians and Surgeons, Boston, and secretary of the Boston Medical Society; instructor in the Harvard Dental School, and a practitioner both of medicine and dentistry; died at his home in Boston, May 12, aged 41.

Richard Sappington, M.D. University of Maryland, Baltimore, 1851; and said to have been the oldest alumnus of that institution; one of the best known physicians and druggists of Baltimore; died at his home in Sunnyside, Baltimore, May 14, from senile debility, aged 84.

Emmanuel K. Deemy, M.D. New York University, New York City, 1860; Acting Assistant Surgeon, U. S. Army from 1862 to 1865; for many years a practitioner of Mechanicsburg, Pa.; died at the home of his son in Bellefontaine, O., May 15, from chronic nephritis, aged 76.

Michael Daniel Murphy, M.D. Bellevue Hospital Medical College, 1884; a member of the American Medical Association; president of the Middlesex County (Conn.) Medical Society in 1909-10; died at his home in Middletown, May 8, from heart disease, aged 53.

Emil H. Pohl, M.D. University of Oregon, Portland, 1893; a member of the American Medical Association; formerly professor of anatomy in Portland Medical College; died at his home in Fairbanks, Alaska, May 12, from cerebral meningitis, aged 41.

Stephen Harrison Griffith, M.D. University of Maryland, Baltimore, 1890; a member of the South Carolina Medical Association; who had recently moved to Greenwood; died at his old home in Gaffney, May 13, from heart disease, aged 44.

R. M. Reynolds, M.D. Philadelphia College of Medicine and Surgery, 1861; a veteran of the Civil War and for ten years thereafter an acting assistant surgeon in the U. S. Army; died at his home in Gypsum, Kans., April 25, aged 69.

William Perry Hager, M.D. Harvard Medical School, 1904; a member of the Massachusetts Medical Society and Northampton Medical Club; surgeon to the Dickinson Hospital, Northampton; died at his home, March 18, aged 36.

Frederick W. Kaiser, M.D. University of Alabama, Mobile, 1885; local surgeon at Flatonia, Tex., for the Galveston, Houston and San Antonio, and San Antonio and Arkansas Pass railroads; died at his home, May 13, aged 58.

Albert Henry Bill, M.D. Rush Medical College, 1875; of Cuyahoga Falls, O.; was instantly killed, May 9, in a collision between his buggy and a train on the Cleveland, Akron and Columbus Railway, aged 60.

Benjamin F. Crumrine, M.D. Medical College of Ohio, Cincinnati, 1876; a veteran of the Civil War; for twenty years a resident of San Antonio, Tex.; died at his home in that city, May 14, aged 66.

Thomas H. Beltz, M.D. University of Maryland, Baltimore, 1863; for more than thirty years a practitioner of York, Pa.; died at the home of his son in that city, May 11, from nephritis, aged 69.

Mary A. White, M.D. Northwestern University Woman's Medical School, Chicago, 1883; died at her home in Chicago, May 22, from arteriosclerosis, complicating chronic interstitial nephritis, aged 76.

Romania H. Palmer, M.D. Fort Wayne (Ind.) College of Medicine, 1882; University of Toronto, 1889; a pioneer practitioner of Harlem County, Neb.; died at his home in Alma, May 14, aged 72.

Andrew J. Rutledge, M.D. McGill University, Montreal, 1883; died at his home in Greenville, Cal., May 7, from the result of injuries received in an accident on the Indian Valley Grade, aged 55.

A. Grant S. Brubaker, M.D. University Medical College, Kansas City, Mo., 1899; formerly of Indianapolis; was found dead in his office in St. Joseph, Mo., May 15, from heart disease, aged 40.

William Renn Richards, M.D. University of Louisville (Ky.), 1902; for four years coroner of Floyd County, Ind.; died at his home in New Albany, May 10, from double pneumonia, aged 32.

Darius Cross Gee (license, Michigan, years of practice, 1903); for fifty years a practitioner of Centerville; died at his home in Ypsilanti, January 20, from senile debility, aged 82.

Edmund Childs Taylor, M.D. Willoughby (O.) University, 1837; for nearly sixty years a resident of Le Roy, N. Y.; died at his home in that place, May 8, from arteriosclerosis, aged 99.

John Smith Poyner, M.D. University of Nashville (Tenn), 1865; a member of the State Medical Association of Texas; died at his home in Thorp Spring, May 12, aged 77.

Garrett G. Hoagland, M.D. Jefferson Medical College, 1884; of Keyport, N. J.; a member of the Medical Society of New Jersey; died at Memphis, Tenn., May 11, aged 54.

John Richard Thomas Reeves, M.D. University of Maryland, Baltimore, 1858; a retired practitioner of Chaptico, Md.; died at his home, April 14, aged 78.

John A. Russell, M.D. Rush Medical College, 1877; died at his home in Chicago Lawn, Chicago, May 18, from cancer of the stomach, aged 60.

Duncan Dunbar McQueen, M.D. Manitoba (Man.) Medical College, 1895; died at his home in Winnipeg, May 6, from pneumonia, aged 45.

Christian J. Hartung, M.D. Rush Medical College, 1889; died at his home in Chicago, May 16, from hypertrophy of the liver, aged 54.

Joseph L. Webb, M.D. Eclectic Medical Institute, Cincinnati, 1871; died recently at his home in Beatrice, Neb., and was buried May 16.

The Propaganda for Reform

IN THIS DEPARTMENT APPEAR REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY, TOGETHER WITH OTHER MATTER TENDING TO AID INTELLIGENT PRESCRIBING AND TO OPPOSE MEDICAL FRAUD ON THE PUBLIC AND ON THE PROFESSION

ERPIOL (DR. SCHRADER)

Report of the Council on Pharmacy and Chemistry

The original rules of the Council governing the acceptance of articles have recently been modified, particularly by adoption of Rule 10, which reads:

> "Unscientific and Useless Articles.—No article will be admitted which, because of its unscientific composition, is useless or inimical to the best interests of the public or of the medical profession."

In view of these modifications, the Council is reconsidering the articles already accepted with the view of determining their compliance with the rules as amended. In line with this the Council reconsidered Erpiol (Dr. Schrader), manufactured by the William S. Merrell Chemical Company, and from the evidence given below concluded that one of the constituents, gossypin, is inert and its use unscientific. The Council therefore voted that Erpiol (Dr. Schrader) be omitted from New and Nonofficial Remedies and authorized publication of the following report.

W. A. PUCKNER, Secretary.

In consequence of the more thorough scrutiny now given by the Council to the therapeutic value of the remedies admitted to New and Nonofficial Remedies, the Council has reconsidered Erpiol (Dr. Schrader), previously accepted for New and Nonofficial Remedies. Erpiol (Dr. Schrader) is the name applied to capsules containing apiol, ergotin and gossypin, which are sold as an emmenagogue. The first two ingredients have a recognized value in the treatment of diseases of the female generative organs. The third, gossypin, is a preparation from cotton-root bark, belonging to the somewhat indefinite class of pharmaceutical preparations known as resinoids.

Cotton-root bark (*Gossypii radicis cortex*, U. S. P.) has been credited by some with pharmacologic and therapeutic properties, similar to ergot, especially in its action on the uterus; experiments on pregnant animals do not confirm this view. Most authorities on gynecology either make no reference whatever to the drug or ascribe little or no value to it. The preparations from the dried bark are inert.

From reports made to him, Professor J. U. Lloyd concluded (*Eclectic Med. Jour.*, 1876, xxxvi, 545) that a prime fluidextract of fresh cotton-root bark is an active therapeutic agent and deserving the attention of the medical profession, while that of the dry bark is inert and worthless. The gossypin on the market is made from the dried bark.

Professor Lloyd, who is considered an authority on eclectic medicine, says: "Were it left to me to admit or exclude it by reason of its therapeutical position, I should exclude it, because, in my opinion, it has never been demonstrated, in clinical practice, to be worthy of any therapeutic recognition whatever."

As the available evidence indicates that gossypin is an inert preparation, Erpiol (Dr. Schrader) was considered in conflict with Rule 10 and the Council has therefore voted that it be deleted from New and Nonofficial Remedies.

PERNICIOUS READY-MADE MIXTURES

As was stated last week in the report on Chichester's Diamond Brand Pills[1] the promiscuous sale of drugs commonly reputed as having abortifacient action, is all too common. The Australian Royal Commission,[2] appointed a few years ago to investigate the nostrum evil, came to the conclusion that pharmaceutical manufacturing houses were largely responsible for the sale of abortifacients. The report of this commission holds that ready-made emmenagogue pills are carried in stock by these houses and it is but a simple matter for irresponsible and criminally inclined persons to embark in the nefarious business of selling them. All that is necessary is for such traffickers to order so many "No. —" pills from a pharmaceutical manufacturing house and use the necessary boxes and labels. The commission referring to the ease with which such products could be obtained, said, regarding the price list of an American manufacturer:

> "A whole page of the catalogue is filled with a list of these homicidal preparations, offered at low prices. It would hardly accord with public interests to publish a copy of it; but the nature of the drugs, their deplorable consequences, and the absolute fatuity of taking them for the criminal purpose which is the ordinary cause of their sale, cannot be too widely known. . . . They are commonly repacked and sold as secret medicines by persons who obtain a living by the traffic, and by pharmacists."

The report further holds that it is a common thing for druggists to sell these ready-made pills over the counter as they would sell a Seidlitz powder. While the Australian report mentions only one firm, the criticism applies to most

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1. THE JOURNAL A. M. A., May 27, 1911.
2. Commonwealth of Australia: Royal Commission on Secret Drugs, Cures and Foods Report, 1907, I, 19.

pharmaceutical manufacturing houses making pills or tablets. The following list taken from the catalogue of a pharmaceutical manufacturer, is typical of its kind:

30. Amenorrhea.
285. Emmenagogue, "A," Bonjean.
Emmenagogue Hobermann (721).
286. Emmenagogue, "B," Hooper.
287. Emmenagogue, "C," No. 4.
288. Emmenagogue, "D," Mutter.
Emmenagogue, Mutter, Improved (710)
Ergotin, Bonjean, 2 gr. (713).
Ergotin, Bonjean, 3 gr. (714).
Ergotin, Bonjean, 5 gr. (715).
294. Ergotin Compound, Goodson.

Should the firms who list these preparations be charged with the matter, their defense would be that all these many formulas for "emmenagogue pills" were made at the request of physicians, who prescribed them. While the defense is a weak one, nevertheless we believe that physicians should carefully refrain from prescribing such ready-made formulas. This applies particularly to preparations having therapeutically suggestive names, names which the public is quick to understand—or misunderstand—and to recommend for purposes not thought of by the prescriber. It is but another illustration of the general objectionableness of "ready-made prescriptions."

PRESS-CLIPPINGS AND NOSTRUM ENTERPRISE

Of the many charges that may be preferred against the "patent medicine" makers, lack of enterprise in obtaining prospective victims is not one of them. We have referred before to that brilliant stroke of advertising done by the exploiters of Purgen, who panegyrized their purgative on sheets of toilet paper. More recently two cases have been brought to our attention in which "patent medicine" makers have resorted to the use of the press-clipping bureaus, for lists of possible purchasers. The following news item appeared in the Brockton (Mass.) *Times*.

> "Mrs. Wm. Wilcox is at the Jordan Hospital, suffering from an attack of acute rheumatism."

This piece of news was garnered in by a clipping bureau and sent to one of its customers—the exploiters of the nostrum "Angeline." If its manufacturers are to be believed—which they are not—"Angeline will permanently cure acute and chronic rheumatism." So the Angeline booklet is sent to Mrs. Wilcox, evidently in the belief that advertising bread cast on the waters may come back after many days in the form of an order.

Raymond & Co., who sell "Raymond's Pectoral Plasters," also use press-clippings. A Sunday-school superintendent, of a small village in Virginia, recently received one of Raymond's "positive cures" for whooping-coughs, bronchitis, etc., with the following ingenious note:

> Dear Sir:—We noticed in the ——— *Journal* that Whooping Cough is interfering with the attendance of your school and are of the opinion that RAYMOND'S PECTORAL PLASTERS are not known in your vicinity, or this would not be the case. We wish you would hand the one inclosed to the mother of one of the little ones affected, that she may see for herself what they ACCOMPLISH. Then when you are both satisfied as to their MERIT will you kindly advise us, on the inclosed card the name of the merchant in ——— who sells medicines of any kind that we may take up with him the sale of these Pectoral Plasters in your community.

Association News

THE LOS ANGELES SESSION

Additional Data About the Annual Session This Month

The Sixty-Second Annual Session of the American Medical Association will be held in Los Angeles, June 27 to 30. THE JOURNAL commenced to give information about it in February. In March there were full details of the railroad arrangements. The Los Angeles Number was issued May 20, devoting twenty-seven pages to a detailed and illustrated write-up. In that issue the programs of the sections were given. Additional information was published May 27, page 1589. The following additional announcements have been received:

MEDICAL ALUMNI REUNIONS AT LOS ANGELES

The usual class reunions will be held on Tuesday evening, June 27. The committee, through the local representatives of the various alumni, will arrange for the places of meeting and procure to the members the most reasonable rates for the dinners. A large register in charge of an attendant will be at the Bureau of Registration on the fourth floor of the Hamburger Building, Eighth and Broadway, where the alumni of the various colleges are requested to register. Members of the Association will confer a great favor on the committee by attending to this, as it will be impossible in any other manner to determine the number to be provided for by the caterers at the various reunion dinners. Information will be given by the registrar as to the places in the city where the reunions are held. It would greatly facilitate the work of the committee if the members who expect to attend reunions would at once notify the chairman by letter.

ANDREW STEWART LOBINGIER, Chairman,
Committee on Section Entertainment and Alumni Reunions.
608 Helman Building, Los Angeles.

RED CROSS FIRST AID CAR

The American Red Cross First Aid Car will be at Los Angeles during the Annual Session. This car, engaged in teaching first aid to the injured in the various parts of our country, is devoted primarily to such instruction on the railroads, but at the various stops made opportunity is always taken to instruct employees in the various manufacturing plants and others. At Los Angeles we will be very glad to receive all members of the American Medical Association who care to visit the car. Its location will be announced later.

CHARLES LYNCH,
Major, Med. Corps, U. S. Army, in Charge, First Aid Dept.

MEDICAL EDITORS TO MEET

The annual meeting of the American Medical Editors' Association will be held at the Alexandria Hotel, June 26 and 27, under the presidency of Dr. Joseph MacDonald, Jr. The annual banquet will be Monday evening at the same hotel. Further information can be obtained from Dr. MacDonald at 92 William Street, New York.

Correspondence

New Suture Material

To the Editor:—For a number of months I have been using, particularly in certain forms of plastic work, a new suture material to which my attention was first called by Dr. Gates, of Bucyrus, O. The material is enameled copper wire. This wire is used in electric work, is very cheap, and I have found it very satisfactory. I get it in two sizes, the smaller size taking the place perfectly of horsehair, while being in many respects much more satisfactory. I use it largely in cases in which I wish to secure accurate apposition of skin incision so as to avoid scar. I have also used the larger size in cleft palate work, using a shot to secure the ends of the wire, the shot not only holding the ends securely but in a large measure keeping the child from working his tongue against the roof of the mouth.

This wire is made by the Dudlo Manufacturing Company, of Cleveland, and it is so cheap that a dollar's worth will last for these purposes a long while. I have been using a larger size in some cases in closing the abdominal incision, but am not sure that it presents any advantages over silkworm-gut, except that it is materially cheaper.

J. F. BALDWIN, M.D., Columbus, O.

The Round Ligament Operation

To the Editor:—In THE JOURNAL, May 20, is a letter from Dr. Raymond Turck, of Jacksonville, Fla., concerning the round ligament operation which has been under discussion. He makes therein a statement which may be construed as an insinuation that I heard of an operation performed by him in the Chicago Hospital during September, 1901, and immediately afterward published my paper on October 5.

It is rather curious that Dr. Turck should not have written this letter ten years ago. The explanation is simple. Dr. Turck has, within the last two years, developed an animus against me, for reasons which it is not necessary to go into here.

My first round ligament operation was performed on the living subject (Mrs. H., wife of an army officer) in the early part of April, 1901, in the Chicago Hospital (where Dr. Turck worked regularly). It was demonstrated to the staff of the hospital, by whom I was assisted, as an original procedure. I first conceived the idea in February and performed the operation in March on two bodies in the dissecting-rooms of Rush Medical College. During the following months I carried out the procedure several times in the Rush Medical Clinic and in the Presbyterian Hospital. These case-records are on file in the latter institution.

I wrote my short paper and made my "very crude drawing" during my August vacation. I did not publish it until October because I wished to examine my early cases occasionally to determine the results of the operation. At this period my usual procedure on cases of retroversion was Kelly's ventrosuspension. I did not abandon this operation until about three years later, after I had thoroughly tested my own operation, and had observed several patients who had successfully stood the test of pregnancy.

From Dr. Andrews himself, some time after my paper had appeared, I first heard that Dr. Frank Andrews had carried out a somewhat similar procedure. He had never published any account of it. From conversations which I have had with Dr. Andrews it is clear that he was the first to carry out the principle of the operation, though, not having made it public, he has no complaint against one who conceived it independently and first described it. Priority can be historically determined only by the evidence of publications.

As to Dr. English's letter in your same issue, I should like to point out that the operation is not meant to produce the result obtained by ventro-fixation or by the Alexander, Montgomery, Gilliam procedures or others of this variety. If it were so, his criticism would be good. I do not aim to suspend the uterus, or to draw it upward unnaturally, as is the effect of these operations. I aim merely at placing the organ in its natural anteverted position, trusting to intra-abdominal pressure acting on the posterior (upper) surface of the uterus to keep it there. Dr. Baldy has very satisfactorily elucidated this principle in his recent papers. If there is some degree of prolapse in addition to the retroversion, I always shorten the uterosacral as well as the round ligaments. If a surgeon wishes to suspend the uterus from the anterior abdominal wall, I advise him not to use my operation.

J. CLARENCE WEBSTER, Chicago.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

FORMULARIES

To the Editor:—Please inform me where I can obtain the very best formulary now in print; and also a book of a general character, containing formulas for the manufacture of almost every compound known, both proprietary and otherwise.

V. J. WARD, M.D., Berlin, Ga.

ANSWER.—It is difficult to say which is the best formulary as that will vary with the purpose for which it is needed. In our opinion the "very best formulary" is "The Physicians' Manual of the U. S. Pharmacopeia and the National Formulary," published by the American Medical Association, price 40 cents. Information regarding patent or secret preparations is apt to be unreliable on account of the difficulties in making complete and accurate analyses of these preparations and because their secrecy enables their proprietors to change the formulas frequently. If the physician hopes to gain anything in his own practice by a knowledge of the composition of these medicines he is apt to be grievously disappointed, for the formulas, instead of testifying to rare knowledge of therapeutics, not in the possession of the average physician, usually call for ingredients, the therapeutic properties of which, if they have any, are well known to the medical profession. These properties are, however, usually so indefinite that they are little suited for use in any special case. It is an absurdity for a physician, after having given much time and skill to the exact diagnosis of a case, to apply a remedy which is equally suited to a dozen different, even if similar, ailments.

The following list includes the more prominent formularies:

Cumming: Formulary, L. S. Matthews & Co., 2623 Olive Street, St. Louis, $2.50 net.

Fenner: Complete Formulary, B. Fenner, Westfield, N. Y., $10 net.

Beasley: Druggists' Receipt Book, P. Blakiston's Son & Co., 1012 Walnut Street, Philadelphia, $2.50 net.

TEST FOR LEAD IN URINE

To the Editor:—Kindly describe a test for lead in urine which is reliable and which a general practitioner with limited technic and facilities could make in his office.

A. L.

ANSWER.—Any method of testing for lead in urine involves the evaporation of the urine and usually the passage of hydrogen sulphid, which processes give off highly offensive odors that the physician will hardly care to have in his office. The following is a reliable method but involves more apparatus than most practitioners possess.

A quart of urine acidified with acetic acid is evaporated to dryness and fused in a crucible with a little pure potassium nitrate until it becomes white. When the crucible is cool, dilute hydrochloric acid is added hot to extract the residue after ignition. The extract is then filtered and the filtrate treated with ammonia to alkaline reaction, to precipitate the phosphates and iron. Ammonium sulphid is added at the same time to throw down the lead and iron as sulphids. This deposit is washed three times by decantation with hot water; then water acidified with hydrochloric acid is added, and the whole allowed to stand until the next day. It is then filtered through a small filter and the residue washed. A little pure nitric acid is then added drop by drop to dissolve the lead sulphid left on the filter and to carry it through as nitrate. This filtrate is collected in a watch-glass, evaporated to dryness, and the final test made by adding a drop of water and a crystal of potassium iodid. A yellow precipitate denotes lead. (Peterson and Haines: Text-Book of Legal Medicine and Toxicology, 1904, ii, 388.)

The Public Service

Medical Department, U. S. Army

Changes for the week ended May 27, 1911.

Fisk, Owen C., lieut., on expiration of his present leave of absence will proceed to the Army and Navy General Hospital, Hot Springs, Ark., for observation and treatment.

Slater, Ernest F., M.R.C., now awaiting orders at New York City, will proceed to Columbus Barracks, Ohio, for duty.

Roberts, William M., major, relieved from duty with the maneuver division, San Antonio, Texas, and will proceed to Fort Thomas, Ky., reporting on arrival to the adjutant-general of the Army.

Stanton, Samuel C., C.S., entered into contract for duty as attending surgeon, headquarters.

Heterick, R. H., M.R.C., left Fort Brady, Mich., on fifteen days' leave of absence.

Crampton, Louis W., colonel, granted leave of absence for four months, with permission to go beyond the sea, to take effect on his relief from duty in the Philippines division.

Thomason, Henry D., captain, ordered to proceed to Raleigh and Asheville, N. C., to assist in the reorganization of the sanitary troops of the state.

Eliot, Henry W., M.R.C., now at Fort McKinley, Maine, is relieved from further duty in the Army transport service and will report to commanding officer of that port for duty.

Vose, William E., major, granted leave of absence for two months and fifteen days, to take effect about July 15; ordered to proceed to Jacks[illegible] about July 1, 1911, for temporary duty, and after [illegible] and on expiration of leave of absence, will procee[illegible] Islands for duty.

Speissegger, Charles A., Jr., M.R.C., is ordered to active duty and will proceed to Fort Moultrie, S. C., for duty at that post; on return of Major Frank C. Baker, Medical Corps, Lieutenant Speissegger will stand relieved from further duty at that post and from active service in the Medical Reserve Corps.

Powell, William A., captain, reports from detached duty with troops to Fort McKinley, Maine, to leave of absence for ten days.

Bushnell, George E., colonel, promoted to, with rank from May 1, 1911.

Ireland, M. W., lieut.-col., promoted to, with rank from May 1, 1911.

Davidson, Wilson T., major, promoted to, with rank from May 1, 1911.

Kilbourne, Edwin D., captain, granted leave of absence for two months.

Bell, Leonard P., M.R.C., granted leave of absence to and including July 4, 1911.

Kean, Jefferson R., lieut.-col., will proceed to Los Angeles to represent the Medical Department at the sixty-second annual session of the American Medical Association in that city, June 27-30, 1911.

Roberts, William M., major, orders directing him to proceed to the Philippines Islands, June 5, is amended so as to direct him to sail from San Francisco July 5, 1911.

Medical Corps, U. S. Navy

Changes during the week ended May 27, 1911.

Rodman, S. S., surgeon, detached from the *Rhode Island* and ordered to the *New Jersey*.

Riggs, R. E., P. A. surgeon, detached from command of the naval hospital, Port Royal, S. C., and ordered to duty in connection with fitting out of the *Ohio* and to duty on board that vessel when placed in commission.

Rossiter, P. S., P. A. surgeon, orders of May 18 should read "naval hospital, Puget Sound, Wash.," instead of "naval hospital, Mare Island, Cal."

Thomas, G. C., asst.-surg., detached from the *Rhode Island* and ordered to the *Ohio*.

Malkin, G. M., A. A. surgeon, appointed acting assistant surgeon from May 18, 1911.

Kress, C. C., asst.-surg., detached from the naval medical school, Washington, D. C., and ordered to the *Celtic*.

Asserson, F. A., surgeon, detached from the naval hospital, Boston, and granted sick leave for four months.

U. S. Public Health and Marine-Hospital Service

Changes for the seven days ended May 24, 1911.

Glennan, A. H., asst. surg.-gen., granted ten days' leave of absence from June 2, 1911.

Kerr, J. W., asst. surg.-gen., detailed to represent the service at the annual meeting of the American Association of Medical Milk Commissions to be held at Philadelphia, May 23-24, 1911; detailed to attend the ninth annual conference of State and Territorial Health Authorities with the Public Health and Marine-Hospital Service to be held in San Francisco, June 24-25, 1911; detailed to represent the service at the annual conference of State and Provincial Health Officers of North America, to be held in Los Angeles, June 30 to July 1, 1911.

Carrington, P. M., surgeon, directed to proceed to Vancouver and Victoria, B. C., on special temporary duty.

Nydegger, J. A., surgeon, relieved from command of the station at Pittsburg, Pa., and directed to proceed to the United States Marine Hospital at Stapleton, N. Y., and report to the medical officer in command for duty and assignment to quarters.

Anderson, J. F., P. A. surgeon, detailed to represent the service at the annual meeting of the American Association of Medical Milk Commissions to be held in Philadelphia, May 23-24, 1911.

Schereschewsky, J. W., P. A. surgeon, detailed to represent the service at a special conference on Conservation of Child Life to be held at Richmond, Va., May 22, 1911.

Bryan, W. M., asst. surg., granted ten days' leave of absence from May 21, 1911.

Stoddard, C. S., A. A. surgeon, granted one month and fifteen days' leave of absence from June 1, 1911.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF POST-GRADUATE WORK, CONTRACT PRACTICE, LEGISLATION, MEDICAL DEFENSE, AND OTHER MEDICOLEGAL AND ECONOMIC QUESTIONS OF INTEREST TO PHYSICIANS

PRESS BULLETINS ON HEALTH TOPICS

The value of newspapers as a medium of educating the people on public health topics is being widely recognized by medical and other scientific bodies, many of which, including the American Medical Association, send out regular press bulletins for the use of editors of newspapers. These bulletins contain announcements of public importance, abstracts of articles and editorials and news regarding new methods of treating disease or recent medical discoveries.

This work has also been taken up by a number of our state associations, notably the Colorado State Medical Society, which has for two years past maintained a press committee, the function of which is to supply to newspapers of the state short articles on disease and its prevention. The report of the press committee made at the last meeting of the state society recounts the work of the past year and is worthy of careful consideration by members of medical societies, and of similar committees in other states. The report is, in part, as follows:

REPORT OF THE PRESS COMMITTEE OF THE COLORADO STATE MEDICAL SOCIETY

Written requests with assigned subjects were mailed to 189 members of this society. Replies were received from many, some refusals, others promises of papers later. About fifty-five complied with the request by sending in good, practical articles. This is a very good showing, when we consider that the work is only in its second year, and that most of those solicited were exceedingly busy members; but it is to these that we look always, as they are the ones who are most ready to sacrifice a few hours' rest or recreation for the good of the masses.

Of these fifty-five papers, fifty were revised, typewritten and published in the public press. Twenty were assigned to forty-eight weekly papers published in different parts of the state. These papers were first prepared in the form of proof-sheets, and were then mailed semi-monthly to the forty-eight weekly papers consenting to use the matter.

The other thirty papers were printed on the editorial pages of the Denver *Post*, the *Rocky Mountain News* and the Denver *Times*, one article a week in each of these papers. The papers, of course, were soon exhausted at this rate and as no more came in the work in these large dailies was of necessity abandoned, much to the disappointment of the editors of the press and of your committee.

The attitude of the press regarding this work, on the whole, is quite favorable, in some instances extremely so. Of course, it largely depends on the character of the matter submitted, and few professional men have the faculty of writing interesting articles for the layman. It is really difficult so to clothe a medical subject that it will be read with interest and understanding by the public. Every article had to be revised before it could be accepted for publication by the lay press. . . .

Of the 225 newspapers in this state that were written to regarding publication, fifty replied—forty-eight in the affirmative, while two requested pay for its insertion.

For this work the society appropriated $100 at our last meeting. Orders have been drawn, as will be shown by the treasurer's books, for the following items:

Postage	$ 25.19
Stationery and return postals	20.00
Circular letters	2.00
Typewriting	20.00
Circulars	3.00
Return postal cards	3.75
Files	.81
Proof sheets	22.75
Envelopes	2.50
	$100.00

The typewriting consisted of making the original lists of members and the assignments and lists of all newspapers published in the state; filling in, writing and addressing all original correspondence, both to members and to newspapers, and the making of three copies of the fifty papers which were published. . . .

Printers, stationers, stenographers and others connected with the work have been pressed into service wherever possible, and all responded nobly to the appeal, with a sacrifice in each instance. This, in conjunction with the work of the members who have so generously responded with material, has been the cost of this year's effort to educate the public on "How to Keep Well."

In closing, may I briefly give my conclusions, formed by two years' active service on this committee? The work is one of the most important which the medical profession can perform for humanity. The public is not yet ready to accept our offering in the spirit in which it is proffered, but is fast growing to recognize our sincerity of purpose.

That education on preventable disease is necessary is without argument. To make this effective, perseverance is equally important, for with each succeeding year some new generation must be reached. To accomplish this, there should be one center or bureau, of which each state society is a part. Papers could then be secured from the best writers in each society, could be collected by the press committee and could be forwarded on to the secretary of this department of the American Medical Association, there to be revised and printed. They should then be distributed to the various press committees of the state societies, whose duty it would be to see that the matter was properly placed in their own state and local press. This would greatly simplify matters and would reduce the cost more than half. As it is at present, each paper, to complete and place in the hands of the lay press, costs in the neighborhood of $5. Whereas, by the centralized idea, it should not cost more than four times this amount to cover the whole United States with each release.

As to the funds, if every state society would appropriate, say $50 for this purpose, sending it on to the Press Committee of the American Medical Association, and an additional $25 for postage for the state committee, a more persistent, consecutive and satisfactory campaign of education could be carried on.

The report of the committee indicates the principal practical difficulty encountered, viz., that of securing a sufficient number of papers to supply any number of newspapers with original and exclusive articles for any length of time. The amount of material needed to supply the newspapers of the entire country would be enormous. With the cooperation of all our members, however, it could be accomplished. The unselfish character of this work is realized when it is understood that the articles contributed for the use of the Colorado press bulletin were published anonymously, bearing only the imprint of the committee to show that they were approved by it. The field opened up by this method of popular education is attractive and well-nigh unlimited, and with the cooperation of the state associations and the leading members of the profession an enormous amount of good can be accomplished.

Advance proofs of the articles for use in Colorado during the coming year show the following titles among others: "What Modern Vaccines Are," "How to Control the Infectious Diseases of Childhood," "Proper Control of Tuberculosis," "Some Food Adulterations," "Shall Consumption be Registered?" "Is a Tumor Harmless?" "Poor Eyesight," "How to Control the Spread of Typhoid," "Overfeeding and Overheating in Winter," "How Typhoid Fever Spreads," "How to Avoid Diseases of the Lungs," "Colds," "How Tuberculosis is Spread," "To Dispose of the House-Fly," "Sanitary School-Rooms." These are all topics of the utmost importance to the health of every individual and both the public and the press will readily cooperate as soon as the importance and value of public education on health topics is made manifest.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

Delaware: State Society and Homeopathic, Dover and Wilmington, June 20. Secretary of the Medical Council, Dr. H. W. Briggs, Wilmington.

Illinois: Coliseum Annex, Chicago, June 13-15. Sec., Dr. James A. Egan, Springfield.

Iowa: Capitol Bldg., Des Moines, June 5-7. Sec., Dr. Guilford H. Sumner.

Kansas: Hotel Grund, Kansas City, June 13. Sec., Dr. H. A. Dykes, Lebanon.

Maryland: 1211 Cathedral St., Baltimore, June 20. Sec., Dr. J. McPherson Scott, Hagerstown.

Michigan: University Bldg., Ann Arbor, June 13. Sec., Dr. B. D. Harison, 504 Washington Arcade, Detroit.

Minnesota: State University, Minneapolis, June 20. Sec., Dr. W. S. Fullerton, 214 American National Bank Bldg., St. Paul.

Missouri: Gymnasium of St. Louis University, St. Louis, June 12-14. Sec., Dr. Frank B. Hiller, State House, Jefferson City.

New Jersey: Capitol Bldg., Trenton, June 20-21. Sec., Dr. H. G. Norton.

New York: June 27-30. Mr. Harlan H. Horner, Chief of Examinations Division, Department of Education, Albany.

North Carolina: Charlotte, June 14. Sec., Dr. Benjamin K. Hays, Oxford.

Ohio: Columbus, June 6-8. Sec., Dr. George H. Matson, State House.

Pennsylvania: Regular, Homeopathic and Eclectic, Philadelphia and Pittsburg, June 27-30. Secretary of the Medical Council, Mr. Nathan C. Schaeffer, Harrisburg.

South Carolina: State House, Columbia, June 13. Sec., Dr. A. Earle Boozer.

Texas: Austin, June 27-29. Sec., Dr. J. D. Mitchell, Fort Worth.

Virginia: Richmond, June 20-23. Sec., Dr. R. S. Martin, Stuart.

Wyoming: University of Wyoming, Laramie, June 6-8. Sec., Dr. J. B. Tyrrell.

Idaho April Report

Dr. O. J. Allen, secretary of the Idaho State Board of Medical Examiners, reports the written examination held at Boise, April 4-5, 1911. The number of subjects examined in was 12; total number of questions asked, 120; percentage required to pass, 75. The total number of candidates examined was 34 of whom 25 passed and 9 failed. The following colleges were represented:

PASSED

College	Year Grad.	Total No. Examined.
University of Colorado	(1907) (1910)	2
Denver and Gross College of Medicine	(1910)	1
Rush Medical College	(1908) (1909)	2
College of Physicians and Surgeons, Chicago	(1892) (1908) (2, 1909)	4
Keokuk Medical College, Coll. of Phys. and Surg.	(1905)	1
Western Eclectic Coll. of Medicine and Surgery	(1909)	1
Sioux City College of Medicine	(1905)	1
University of Louisville	(1893)	1
University of Michigan, Dept. of Med. and Surg.	(1909)	1
Michigan College of Medicine and Surgery	(1895)	1
University of Missouri	(1908)	1
St. Louis University	(1908)	1
Creighton Medical College	(1900)	1
New York University Medical College	(1897)	1
Medical College of Ohio	(1908)	1
Ohio-Miami Medical College	(1910)	2
Ohio Medical University	(1898)	1
Jefferson Medical College	(1910)	1
University of Toronto, Ontario	(1907)	1

FAILED

College	Year Grad.	Per Cent.
College of Physicians and Surgeons, Chicago	(1909)	72
Chicago College of Medicine and Surgery	(1909)	69
Illinois Medical College	(1901)	71
Medical College of Indiana	(1904)	62
Kansas Medical College	(1905)	72
St. Louis College of Physicians and Surgeons	(1906)	68
Creighton Medical College	(1907)	73
Tennessee Medical College	(1894)	60
University of Tennessee	(1894)	51

Georgia Homeopathic Reciprocity Report

Dr. R. E. Hinman, secretary of the Georgia Homeopathic Board of Medical Examiners reports that at the meeting held at Atlanta, May 2, 1911, one candidate, a graduate of the Cleveland University of Medicine and Surgery, 1894, was licensed through reciprocity with West Virginia.

New York State Board of Medical Examiners

A communication from Dr. M. J. Lewi, secretary of the New York State Board of Medical Examiners, states that a meeting of that board was rendered necessary for organization purposes by reason of the death of both Drs. William Warren Potter and W. E. Ely, respectively president and vice-president of the board. The meeting was called by Dr. Augustus S. Downing, First Assistant Commissioner of Education, May 19, 1911, at Albany. At this meeting Dr. Glentworth Reeve Butler, Brooklyn, was elected president, and Dr. Henry B. Minton, Brooklyn, vice-president. The question committee was reorganized as follows: chairman, Dr. Lee H. Smith, Buffalo; Dr. Ralph H. Williams, Rochester; Dr. A. W. Booth, Elmira, and Dr. Henry B. Minton, Brooklyn.

In keeping with the action of the board at its last annual meeting, a resolution was adopted that on and after Jan. 1, 1912, examination groups in each topic shall consist of twelve questions (instead of fifteen as heretofore) the first six of which must be answered by the candidate and, from the remaining six, the candidate is to answer four questions of his own choosing.

Book Notices

Technik der mikroskopischen Untersuchung des Nervensystems. Von W. Spielmeyer, Privatdozent und Assistent an der psychiatrischen und Nervenklinik in Freiburg i. Br. Cloth. Price, 4.40 marks. Pp. 131. Berlin: Julius Springer, 1911.

This handy manual deals with the microscopic technic of the examination of nervous tissues in a manner adequate for practical purposes. It contains most recent methods at all applicable in routine neuropathologic work. A feature deserving of commendation is the omission of both the obsolete and the untried and theoretical in neurologic technic. The chapters on "Principles," and "Scope and Aims of Examinations Into the Normal and Abnormal Histology of the Nervous System." are excellent and appropriately placed as an introduction to methods [illegible] der Berliner medizinischen Gesellschaft [illegible] sjahre 1910. (Separat-Abdruck aus der [illegible] ienschrift.) Herausgegeben von dem Vor- [illegible] Band XLI. Paper. Pp. 380, with Illustrations. Berlin: L. Schumacher, 1911.

This work consists of reprints from the *Berliner klinische Wochenschrift*. It is divided into two parts; the first gives the transactions and discussions on the various papers of the Berliner medizinische Gesellschaft, which numbers 1,638 regular members, and the second part contains the papers presented before this society.

Diseases of the Stomach and Intestines. By Boardman Reed, M.D., Member of the American Medical Association. Third Edition. Cloth. Price, $5. Pp. 1037, with 112 illustrations. New York: E. B. Treat & Co., 1911.

The third edition of this work retains the commendable features of the previous editions; the book has been subjected to a thorough revision, bringing it up to date. Several of the chapters have been practically rewritten and an entirely new chapter on "Arteriosclerosis in Relation to Affections of the Gastro-Intestinal Tract" has been added. The book presents in one volume the information needed by the practicing physician regarding the diseases of the stomach and intestine.

Diagnostic and Therapeutic Technic. A Manual of Practical Procedures Employed in Diagnosis and Treatment. By Albert S. Morrow, A.B., M.D., Adjunct Professor of Surgery in the New York Polyclinic. Cloth. Price, $4 net. Pp. 775, with 815 illustrations. Philadelphia: W. B. Saunders Co., 1911.

Many methods of diagnosis and treatment, even the commoner ones, fail through faulty technic, or are neglected entirely by the practitioner because adequate descriptions of the procedures are not readily available in general medical texts. In "Diagnostic and Therapeutic Technic" Morrow describes a large number of these minor operations and diagnostic methods including transfusions, infusions, venesection, intubation, tracheotomy, exploratory punctures and aspirations, urethral and pelvic examinations, etc. Outline drawings showing instruments, position of patient and operator, and the successive steps in the more complicated operations accompany the text.

The chapters on anesthesia, including local and spinal anesthesia, are completely and well written. The dangers of the A-C-E mixture and of gastric lavage before the return of the reflexes after general anesthesia might well be emphasized more strongly. The points urged against spinal anesthesia are well taken.

In the administration of antitoxic serums, we question the advisability of advocating the axillary space as a site for the injections. The risk of injuring vessels and other structures in a struggling child is too great, when there are so many other regions where loose cellular tissue can be found.

A paragraph on preserving fluids for tissues might have been added with advantage to the chapter on the collection and preservation of pathologic material. Exploratory punctures, and the reasons for occasional failures to obtain fluid are interestingly discussed.

The chapters dealing with the examination of special organs are prefaced by a brief review of the anatomy of the part under discussion. With the exception of the description of the ear, which is written in an unnecessarily popular style, these preliminary notes form a concise and valuable introduction to the study of the several organs. We commend especially the section on the larynx, in which a well illustrated description of intubation is given.

The typography is good. The outline drawings are more practical than artistic, and in one or two instances are misleading. Thus in illustrating hypodermoclysis the fluid is represented as in the breast instead of beneath it. This is a common error in performing hypodermoclysis and causes unnecessary suffering to the patient.

Aside from operations such as bronchoscopy, which only the skilled specialist is competent to perform, most of the procedures described are those which practitioners, particularly the large number who meet emergencies in practice remote from the larger medical centers, may at some time be called on to perform. The hospital intern and the older practitioner will find here a large store of practical and helpful information.

Medicolegal

When Orders for Physical Examinations Should Not Be Granted

The Court of Appeals of Kentucky says, in Lexington Railway Co., vs. Cropper (133 S. W. R. 968), a personal injury case brought by the latter party, that, manifestly, the application for a physical examination should be based on an affidavit showing that knowledge of necessary and material facts in respect to the plaintiff's injuries or condition can be acquired only by such examination; and the right to the order, being founded on necessity, will not extend beyond the necessities of the case. In no case should the order be granted merely for the purpose of obtaining cumulative evidence, or where the injuries complained of are so patent as to be apparent. In numerous cases of this character this court has decided that the defendant has not the arbitrary right to demand a physical examination of the plaintiff, but the application for an order for such an examination is a matter which addresses itself to the sound discretion of the trial court; and on appeal its ruling in granting or refusing the order will not be disturbed, unless it is made to appear that there was an abuse of that discretion. In this case there was no abuse of discretion, and no error, in refusing to grant an order for the physical examination of the plaintiff, when not applied for until after he had concluded the introduction of his evidence, on the second trial of the case, which had been pending for more than two years.

Sufficient Preliminary Proof by Physicians of X-Ray Photographs

The Supreme Court of California says that in the personal injury case of Kimball vs. Northern Electric Company (113 Pac. R. 156) certain *x*-ray photographs of the plaintiff's knee were introduced in evidence after two of the medical witnesses had been examined with reference to them. It was contended that the proponents of the photographs failed to introduce proof of their correctness, or that either of the physicians was an expert in such matters. While, perhaps, the examination was not so minute on that subject as one might wish, it did sufficiently appear that the two witnesses and others were present at another physician's office when *x*-ray plates were made of the plaintiff's knee, and that the photographs introduced in evidence were printed from those plates. While it would have been better, no doubt, to have introduced evidence of the familiarity of the physicians with the process of *x*-ray photography and the methods employed in preparing these particular exhibits, the court cannot see that the omission so to do amounted to error necessitating the reversal of the cause. The witnesses were qualified surgeons. It is well known that the *x*-ray is almost universally understood and used by surgeons of the present day in examining injuries. Doubtless the court required less preliminary proof from such witnesses than would have been exacted from laymen. The surgeons had testified without objection that they had examined the injuries themselves by the use of the *x*-ray apparatus, and this testimony in itself was an indication that they were familiar with the use of the Roentgen rays. When, therefore, they testified to the taking of certain *x*-ray pictures, or rather the making of plates, the court doubtless assumed that the ordinary methods of those familiar with such matters had been followed. While counsel for the defendant objected to the testimony of the surgeons on the ground of the failure of the plaintiff to show their expert qualifications, no request was made of the court that they should be preliminarily questioned on that subject. The surgeons put initials on the plates at the time they were made, and testified that those initials appeared on the prints introduced in evidence. But, even if an error were committed in the admission of testimony relating to the photographs, it was harmless, for it was evident that the condition shown by the photographs did not differ from the circumstances disclosed by the testimony of the physicians based on their own observations. A photograph is used like any other chart, for illustrative purposes: and where, as in this case, such illustrations do not mislead, no error is wrought.

Society Proceedings

COMING MEETINGS

American Medical Association, Los Angeles, June 27-30.

American Academy of Medicine, Los Angeles, June 23-26.
American [illegible]ation, Montreal, Canada, June 13-14.
American [illegible] Association, Denver, June 19-20.
American Otological Society, Atlantic City, June 26-27.
American Proctologic Society, Los Angeles, June 26-27.
American Surgical Association, Denver, June 19-21.
Conf. of Bds. of Health of N. America, Los Angeles, June 30-July 1.
Maine Medical Association, Augusta, June 28-29.
Massachusetts Medical Society, Boston, June 13-14.
Nat'l Assn. for Study and Prev. of Tuberculosis, Denver, June 20-21.
National Association for Study of Epilepsy, St. Louis, June 16.
New Jersey, Medical Society of, Spring Lake, June 13-15.
North Carolina, Medical Society of State of, Charlotte, June 20.
Wisconsin, State Medical Society of, Waukesha, June 7-9.

AMERICAN THERAPEUTIC SOCIETY

Twelfth Annual Meeting, held in Boston, May 11-13, 1911

Under the presidency of Dr. H. W. Wiley, Washington, D.C.

The officers elected were named in The Journal, May 27, page 1584.

Bromato-Therapy

Dr. H. W. Wiley, Washington, D. C.: Foods are of the greatest possible service in medical practice, when properly employed, not only in the prophylaxis of disease, but also in its actual treatment. This, of course, has long been recognized in the case of diabetes, but in many other affections we are only just beginning to appreciate their value, and I feel sure that when we have come to fully understand this matter a great step forward will have been made in the practice of medicine. We have, naturally, to examine into the properties of various articles of diet. A bitter controversy has been raised over the question, Is alcohol a food? Again, the respiration calorimeter has come to our assistance, and it has been shown by Atwater and his assistants that the average adult human organism is capable of completely oxidizing a considerable quantity of alcohol per day. This quantity, of course, varies in different individuals, but may be set down as about 3 ounces, provided the administration is distributed over different periods of the day. I think there is a marked tendency in the profession to regard the virtues of alcohol as very questionable. The old idea that if one is going to expose himself to extreme danger or extremes of climatic conditions, the body should be fortified by the use of alcohol, has disappeared. It is quite certain now that alcohol does not make one less apt to freeze, but more so, and that it does not give any such amount of energy as to be at all compensatory for the injury it may produce. On the witness stand I have stated that I considered alcohol a food because a certain quantity of it is burned in the body, with the production of heat and energy. In the light of recent investigations, however, and from theoretic considerations, I am inclined to the opinion that the effort to rid the body of even the small quantities of alcohol mentioned may, perhaps, consume a great deal more energy than is furnished by its combustion, and that, on the whole, it cannot be regarded as a food, even in the limited sense here described. The susceptibility to certain diseases of persons addicted to alcohol has been noted by many writers, and the records of death by sunstroke indicate that a very large percentage of the victims are alcoholics. The tendency which alcohol has to weaken the bodily resistance, therefore, is a matter not to be left out of consideration. The general result of the study of this problem has been an accelerated movement to restrict the use of alcohol in medical practice, and especially in hospital practice. Both as a means of preventing disease and as a remedy this agent is rapidly falling into disrepute, so that it bids fair to become merely a memory in our materia medica and the Pharmacopeia.

Some Observations on Vaccine Therapy

Dr. E. W. Nagle, Boston: To secure an active vaccine one must have a virulent type of bacteria; these must be killed at the correct time, before they begin to lose their cultural characteristics, and it is essential to subject them to the lowest degree of heat for the shortest possible time necessary to kill them. The question of dosage is a difficult one. I do not depend on the opsonic index, but rely entirely on the clinical symptoms. Usually my beginning dose is a small one: one-fourth of 1 c.c. (150,000,000 in the case of staphylococcus vaccine) increasing to 0.5 c.c., 0.75 c.c., and then 1 c.c., and continuing with this dose if there has been marked improvement. In cases where it seems imperative to bring the patient quickly under the influence of the vaccine—as when there is recurrence during treatment—I do not increase my dose gradually, but after the first small dose give a large dose once. In cases where vaccine is administered oftener than twice a week, I give smaller doses. The injections have always been given in the arm, alternating right and left in order to give the site of the injection the longest possible time to recover from any soreness. Chronic suppurative ears interest me especially, as they respond so readily to vaccine therapy. My success in treating nose cases with vaccine is not, I regret to say, to be compared with that obtained in discharging ears.

DISCUSSION

Dr. E. W. Nagle: In the suppurative ears we found the streptococcus, staphylococcus, pseudo-diphtheria bacillus, proteus and a number of bacteria which it was impossible to identify. In the nose cases there was also a great variety of bacteria, and many of these we were unable to classify. As to other treatment in conjunction with the vaccine, absolutely nothing else was employed, except in the way of cleansing procedures. All the patients had previously been treated by the ordinary methods.

Salvarsan as a Patented Product

Dr. F. E. Stewart, Germantown, Pa.: The object of the patent law being to promote progress in science and the useful arts, it logically follows that its proper application to materia medica inventions will promote progress in materia medica science, and the arts of preparing medicines and applying them to the healing of the sick. As now applied, the patent law hinders progress in the knowledge of drugs as therapeutic agents and injures the professions of medicine and pharmacy. Product patents are monopolies granted to persons who are not required to be interested in promoting science or in advancing the arts of medicine and pharmacy. Progress in materia medica science and in the pharmacologic arts is dependent on the cooperation of those engaged in the practice of the pharmacologic arts and in the results of the publication of their researches for the benefit of science. The position assumed by certain members of the medical profession, that it is immoral for physicians to make money out of the sale of drugs, is unwarranted. The wrong is in carrying on what ought to be a professional business in a commercial manner. Materia medica products cannot properly be introduced to science without using the educational machinery of the profession, viz., medical societies and press. When products are controlled by commercial introducers their introduction to science by the cooperative work of the profession is impracticable, because the opening of the journals and medical societies to their discussion converts the educational machinery of the profession into a great advertising bureau for the exploitation of monopoly. Most of the experimental work necessary for determining the value of new therapeutic agents is carried on in hospitals, dispensaries and other charitable institutions. When the results are appropriated by commercial houses for building up monopolies, beneficence is turned into commercial exploitation, a crime against humanity. Under a system of competition it is safe to open the educational institutions and their laboratories to the manufacturers of materia medica products, and ask their cooperation in developing the science of materia medica. Under the system of product patents maintained in this country the medical journals are forced to give the manufacturers advertising space that millions of money could not purchase; being compelled to do this in order to keep up with the foreign journals in publishing important news.

We are told that Ehrlich made an arrangement with the German house of Meister, Lucius and Bruening whereby this house furnished him with the money required to carry on the

"606" experiments which resulted in the discovery of dioxydiamidoarsenobenzol, with the understanding that if a product was obtained of sufficient value to warrant its commercial introduction, it was to be patented and the patent controlled by the house mentioned. I believe that the arrangement thus made represents a plan of cooperation between professional and commercial interests which, if purged of the monopolistic feature now pertaining to it, might be made in every way commendable. Medicine, including pharmacy, is an altruistic profession. Its object is to prevent disease and heal the sick; not to exploit the sick-room for gain. Cooperation between the medical and pharmaceutical professions and the great manufacturing houses with that end in view means progress, but such cooperation must include control of the pharmacologic arts by licensed practitioners of medicine and pharmacy and compliance with rules for the advancement of pharmacologic science.

The Uses and Limitations of General Anesthesia as Produced by Subcutaneous and Intravascular Injections

Dr. W. W. Babcock, Philadelphia: Burkhardt's method consisted of the intravenous injection of chloroform and of ether. Chloroform soon had to be abandoned, but ether is still employed to a limited extent, especially in Russia. In the seventy-five or 100 cases now on record there have been one death and several instances of pulmonary embolism. The method is not, therefore, to be recommended. I desire to call attention to the production of anesthesia by the subcutaneous injection of narcotics, which is a recent application of a very old use for these agents. It is not, as a rule, well adapted for children, but in adults I have met a very fair measure of success. In 10 per cent. of the cases in which it was tried I have found it possible to induce complete anesthesia, with abolition of the reflexes, and in from 50 to 60 per cent. sufficient anesthesia for operative purposes, though without entire abolition of these. The drugs employed are of three classes: (1) hyoscin or scopolamin; (2) morphin and apomorphin; (3) alcohol and similar agents. In regard to apomorphin, I am convinced that its main action is that of a sedative. It is, therefore, a terrible mistake to administer it in cases of narcotic poisoning, as is sometimes done. The method which I have found most satisfactory is to give a subcutaneous injection of one-eighth grain of morphin with 1/100 grain of hyoscin or scopolamin, and also an enema of normal salt solution containing 1 to 3 ounces of alcohol. In fifteen minutes the hypodermic injection is repeated, if necessary, and in fifteen minutes more a third injection may possibly be required. The doses are regulated entirely according to the effects observed. When apomorphin is employed, only a very slight emetic effect, or none at all, has been noted. Objections to this method are, first, that, as a rule, it is not suitable for abdominal operations; and second, that if toxic products are present in the system the narcotics will tend to retard elimination by closing up the emunctories. It is an ideal method for operations about the mouth, throat and nose, where ether proves very dangerous and unsatisfactory, and when it is used we can often dispense with tracheotomy. It is essential to watch the breathing of the patient very carefully, and sometimes it is found necessary to pull the tongue forward.

DISCUSSION

Dr. A. E. Gallant, New York: If during anesthesia the patient's head is kept in such a position that the chin touches the chest, the tongue will never fall back.

Dr. W. J. Morton, New York: It is not generally known that previous to the first use of ether anesthesia at the Massachusetts General Hospital (in 1846) my father, Dr. Morton, had employed this for thirty-seven private operations done by Dr. Henry J. Bigelow, and that, before beginning the administration of ether, he was accustomed to give large doses (40 minims) of laudanum.

Epithelial Conductors and Obstructors

Dr. Robert T. Morris, New York: The chief obstructor of the development of epithelium on raw surfaces is peroxid of hydrogen, a substance which is in universal use throughout North America. Next to it in this regard, and also next most commonly used, is gauze, and the third most destructive agent for young epithelial cells is some form of ointment. Then come the so-called protective coverings, such as gutta percha, which allow culture media to collect underneath. Among conductors of new epithelium one of the most remarkable is the moist skin of an egg, which some of the old surgeons believed actually to carry a vital principle. Other good conductors are animal membranes, like Cargile membrane, silver foil, and oiled silk (if properly sterilized). Substances which are entirely impervious are conductors to a very limited extent, if cut into strips and employed with great care.

Diabetes Mellitus from a Surgical Standpoint

Dr. Alfred King, Portland, Maine: In diabetes it is essential that there should be a careful and complete examination of the urine and a study of its changes, a consideration of the metabolic changes taking place in the fluids and tissues of the body, especially as regards nutrition and the processes of repair, and also a general examination, including the blood, blood-vessels, emunctories and resisting power. Gangrene, which is generally due to arteriosclerosis, often calls for surgical treatment, preventive, palliative or operative. In the lower extremities the disease may affect but one or more toes. In these cases if the line of demarcation forms early, if the adjacent parts are not inflamed, and if there is a good pulse in the posterior tibial artery behind the internal malleolus and in the dorsalis pedis, the removal of the dead portion alone may be sufficient. If, however, the line of demarcation forms slowly, if the foot is inflamed and the pulse in the arteries mentioned is feebly felt, if at all, operations on the foot are harmful. In such cases the amputation should be above the knee. The diabetic may require any kind of surgical procedure. Because of his disturbed metabolism, impaired nutritive and reparative processes, reduced resistance and depressed nervous system, the most careful consideration for the patient is called for, and also the most skillful application of the principles of surgery in the treatment of wounds. If, however, proper precautions are taken and the patient is properly prepared beforehand, a large proportion of diabetics can be operated on as safely and satisfactorily as other individuals.

Chronic Acetanilid Poisoning: A Definite Symptom-Complex as a Result of the Continuous Ingestion of the Drug

Dr. H. C. Gordinier, Troy, N. Y.: Chronic acetanilid poisoning is productive of the following perfectly definite and easily recognized symptom-complex: chronic cyanosis, cardiac insufficiency, a distinct blood-picture and definite renal changes. The acetanilid habit is much more common than is generally supposed, and its enslavement is comparable with or worse than that of opium or alcohol. Acetanilid has a special predilection for the cardiovascular system, acting as a virulent hemolytic poison.

DISCUSSION

Dr. P. K. Brown, San Francisco: In these cases of cyanosis the blood-picture alone usually makes the diagnosis clear. In my fatal case, previously reported, in which the patient took 60 grains of acetanilid within a short time, it is noticeable that, in addition to the terribly destructive action on the blood, there appeared to be an effort at repair, as shown by the presence of some red cells of very large size.

Dr. C. E. deM. Sajous, Philadelphia: There is one effect of the coal-tar products which is often overlooked, namely, constriction of the arterioles, as shown by animal experimentation. This, I think, offers ample explanation of the characteristic cyanosis. In my experience cases of acetanilid addiction are not so difficult to manage as those of opium addiction. The patients usually get over the habit readily, and with no permanent ill effects.

The Treatment of Leukemia with the Mixed Toxins of Coley

Dr. R. C. Larrabee, Boston: Five cases have been previously reported. I have now to report thirteen additional cases: nine of my own, three of Boldoff's and one of Coley's. Under this treatment the general condition of the patients, some of whom had been treated with the *x*-ray without benefit, usually improved markedly, and in many instances there was a very marked diminution in the number of leukocytes. In other cases the leukocytes did not diminish, though the general condition improved. It is noticeable that while the myelogenous cases were often benefited, the lymphatic cases showed no improvement. This mixed toxin *treatment* is to be regarded as merely palliative, not curative; but in many instances it adds greatly to the comfort of the patient and no doubt prolongs life. It should not be forgotten, however, that it is a dangerous treatment, and ought, therefore, to be employed with the greatest caution.

Hypo-Adrenia as a Cause of Death in Infections, and Its Treatment

Dr. C. E. deM. Sajous, Philadelphia: By hypo-adrenia I mean that form of adrenal insufficiency which occurs late in the course of a febrile disease, as a result of the exhausting secretory activity, probably aggravated by temporary local lesions, to which the adrenals are subjected during the early or febrile period of the disease. As stated by Moricbau-Beauchant, the adrenals seem to show a special predilection for certain infections, by far the most marked in the case of diphtheria. If at the end of an infectious disease the case, instead of proceeding to convalescence, remains in a condition of asthenia, with low blood-pressure and temperature, there is good ground for the conclusion that terminal hydro-adrenia has occurred. As to the pathology, in the special type in question, no adrenal lesion may be discernible. In the majority of instances, however, the organs are congested, and may show here and there a limited hemorrhagic area. In these cases the use of adrenal gland or of pituitary body, which acts very similarly, though with less violence and more lasting effects, sometimes gives surprising results. In emergency cases large doses of the adrenal active principle may be injected with saline solution intravenously, but in the average case the glandulæ suprarenales siccæ of the U. S. Pharmacopeia given by the mouth, is fully as effective, if commenced as soon as asthenia and low blood-pressure appear. The dose of 3 grains, three times a day, should be increased gradually to 5 grains.

Malignant Endocarditis in New York City

Dr. T. E. Satterthwaite, New York City: Malignant endocarditis is a very serious disease, often difficult of diagnosis, and usually fatal, in spite of the best possible treatment. By pathologists it is believed to be simple endocarditis which has become infected by poisonous germs. It is so rare an affection that no one person can have had much personal experience with it, but I have had the unusual opportunity of studying 100 cases on the record books of several New York hospitals. With regard to the infecting agent, only those of the streptococcus, staphylococcus, pneumococcus and gonococcocus groups were recorded, either as having been found in the living blood or in the body after death. Among the associated systemic diseases I found rheumatism in more than one-third of the cases, and suppurating foci, pneumonia, pleurisy, phthisis, syphilis, gonorrhea, influenza, tonsillitis, chronic peritonitis, chronic appendicitis, colitis and nephritis in varying proportions. In the 100 cases a germ was found in only thirty-three, and some of these cases were examples of mixed infection. The predominating germs were of the pus-producing varieties. Under the age of 4 years malignant endocarditis almost never occurs in New York, as shown by the statistics of a number of hospitals, including the Babies' Hospital. It is apparently most frequent between the ages of 30 and 40. Basing our prognosis on the 100 hospital cases, we may conclude that 85 per cent. of the patients die, while 10 per cent. improve for a time—how long is uncertain. In 5 per cent. only is there such a degree of improvement that it may be called recovery, so far as the malignant nature of the disease is concerned. In these 100 cases the number of weeks spent by patients in the hospital varied from one to thirteen, the majority succumbing before the end of the fifth week. Antigonococcic serum was used in one case, other serums in three, and vaccines in five; but in no instance was there recovery under these forms of treatment.

Other Papers Read

Other papers read were: "Note on Fluorescence Excited Within Human Tissues as a Method of Treatment," by Dr. W. G. Morton, New York; "A Modified Vaccine Therapy in Pneumonia, with Animal Experiments," by Dr. P. K. Brown, San Francisco; "Use of Nickel Sulphate in Medicine," by Dr. L. Kolipinski, Washington, D. C.; "Panhysterocolpectomy: Complete Excision of the Uterus and Vagina, with Closure of the Vagina, for Prolapsus," by Dr. A. E. Gallant, New York; "Considerations on the Treatment of Chronic Disease," by Dr. J. M. Taylor, Philadelphia; "The Treatment of Chronic Universal Perihepatitis," by Dr. R. W. Wilcox, New York; "The Newer Heart Remedies," by Dr. W. F. Boos, Boston.

SOUTH CAROLINA MEDICAL ASSOCIATION

Sixty-Third Annual Meeting, held at Charleston, April 18-20, 1911

Under the Presidency of Dr. James H. McIntosh, Columbia

Officers Elected

The officers for the ensuing year are the following: President, Dr. J. W. Jervey, Greenville; vice-presidents, Dr. A. E. Baker, Charleston, Dr. J. H. Miller, Laurens, and Dr. H. B. Lee, Summerville; secretary, Dr. Edgar A. Hines, Seneca; treasurer, Dr. C. P. Aimar, Charleston.

President's Address: The Imperative Necessity for Proper Drainage of Our Water Courses and Lowlands

Dr. James H. McIntosh, Columbia: The United States government spends millions of dollars every year on the development of the arid and unfruitful lands of the West, and by irrigation and drainage makes these acres to become the most productive and valuable lands in our country. We must impress strongly on this government of ours that the time has come for it to turn its paternal eye in this direction. There are thousands and thousands of acres of land in the South, rich in every constituent necessary to the production of enormous crops, but what it needs, and must have, is drainage, and, incidentally perhaps, irrigation. When these lands have been properly drained, not only will they become most productive, but in addition, we shall have abolished them as disease-breeding foci, and the whole country will feel the good effects. I urge the state and counties to take up this work at once, using the state convicts and county prisoners for that purpose. My attention has been directed to this matter particularly, because of my connection with life insurance work. It is rare, indeed, to come across a single application in which malaria does not figure as a cause of death of at least one member of the applicant's family, while in the personal history it is by far the most frequent cause of illness.

Multiple Neuritis, Probably Beriberi Associated with Pellagroid Erythema

Dr. Robert Wilson, Jr., Charleston: The patient was a medical student, 22 years old, of good habits. Illness began in August, 1910, with slight edema of lower extremities and fatigue on comparatively slight exertion. August 29, at which time general condition had improved slightly, according to his own account, he still had slight edema of legs and complained of weakness. Examination revealed a systolic murmur at apex, moderate degree of anemia, knee-jerks sluggish, a pronounced erythema on back of each hand extending from base of phalanges to the wrist, tongue red. Urine contained no albumin. Two weeks later he returned to his home in Virginia. At this time the erythema had almost disappeared, but he was feeling very weak. No other symptoms had developed. On reaching home, September 14, he was exhausted and had to be carried from the train to his home; also had a temperature of 101 F. The fever continued several days and then passed off. The urine was scanty and dark. Immediately on reaching home he developed a multiple neuritis, the lower extremities suffering in greater measure than the upper. Improvement began very shortly and continued without interruption until complete recovery. When first seen the diagnosis of pellagra was made tentatively, based on the erythema, general weakness, red tongue and sluggish reflexes. Later developments, however, left little doubt that the case was one of beriberi. The most interesting feature of the case was the erythema which was identical in appearance and location with that which is characteristic of pellagra.

Herniotomy in Youth and Old Age

DR. A. E. BAKER, Charleston: At this time of life Nature's recuperating powers are weak and may not respond to therapeutic measures.

Wounds are sealed with collodion and no plaster of Paris should be applied to the child's body. About eight hours after operation a very young child may be permitted to leave the infirmary. The mother is the best nurse. The unmodified Bassini operation is faulty in the cure of hernia in old age. Method advised—approximating like tissue to tissue. The conjoined tendon is not a part of the closure of the internal abdominal ring—it serves only to close the lower two-thirds of the canal. Local anesthesia is preferable in old age.

DISCUSSION

DR. C. B. EARLE, GREENVILLE: I would take exceptions with Dr. Baker as to a mother being the best nurse for the young child. I have operated on a number of young children, and I think the younger the child the more easily that child is controlled by a nurse. I do not think herniotomy should be done before two and one-half years, because we can easily get a cure by pressure. I would also take issue with Dr. Baker about the suture. The reason Dr. Baker advocates the linen or silk, is that the circulation is bad in old patients—the very reason which renders an unabsorbable suture more apt to become an irritating body and be thrown off, and irritation of the suture is probably the greatest cause of relapse after herniotomy.

DR. J. SHELTON HORSLEY, Richmond, Va.: I wish to add my experience to Dr. Baker's in regard to the postoperative treatment of children at their homes. I believe all children (private patients) under five years of age, do better if they are taken from the hospital as soon as the operation has been performed. They are accustomed to be carried about by their parents, to have their nourishment prepared in a certain way, and to environments which are distinctly different from those of the hospital. This abrupt change often interferes with the child's nutrition and in this way prevents healing of the wound. I believe also that all hernia patients over fifty-five years of age ought to be operated on under cocain unless they are excessively nervous. I recently operated on an old gentleman eighty-one years of age, under cocain, and he made an entirely smooth convalescence. The mere giving of a general anesthetic to a patient of this age is much more dangerous than the operation for the hernia.

Typhoid and Its Prevention by Vaccination

DR. ALEXANDER LAMBERT, New York City: Typhoid is an index of a community's sanitation, and at present the incidence of this disease decreases as the population increases—that is, typhoid is most prevalent in small towns and in the country. It is also more prevalent in the South than in the North. A considerable reduction in the number of cases of typhoid has been secured wherever a pure water-supply has been installed. In like manner supervision of urban milk-supplies has eliminated some typhoid. The Spanish-American War taught us the importance of the common house fly as a disseminator of the disease, and the importance of contact infection. War against the fly is spreading throughout the country, and isolation of typhoid cases is being more strictly carried out. The last factor to be discovered in the spread of typhoid has been the "carrier." Inasmuch as typhoid cases disseminate bacilli during the incubation period and for an uncertain length of time after recovery, while a smaller per cent. become chronic carriers, it has been impossible to control this factor in the spread of the disease. Realizing the impossibility of controlling the many factors concerned in the spread of typhoid, medical men redoubled their efforts to find some suitable method of prevention. Sir A. E. Wright, in 1898, began wholesale innoculations against typhoid in the British army in India, and continued this work in South Africa during the Boer war. Germany followed suit in the Hereros campaign, 1904-1907. The French Academy has just recommended that the same work be instituted in the French army, and in 1910 voluntary inoculations against typhoid were begun in the United States army. So far the results of typhoid vaccination have been gratifying; the morbidity has been reduced more than one-half, and the mortality by considerably more than this. Our army on the Mexican border is immunized, and so far there has not been a case of typhoid, which is in contrast to the late war with Spain, when one-fifth of the army had typhoid and 86 per cent. of all deaths during the war were due to the same cause. The vaccination is entirely harmless, consisting of three hypodermic injections, first of 500,000,000 dead bacilli, then one billion ten and twenty days later. The general reaction following these injections consists of malaise, headache, and slight rise of temperature, with a local reaction of hyperemia the size of the palm of the hand, and at times swelling of the axillary glands; both reactions usually subside within forty-eight hours.

A Typical Case of Raynaud's Disease

DR. T. E. WANNAMAKER, JR., Cheraw: The patient, a well-nourished colored male of 27 years, has suffered from the disease since 14 years of age. Has lost the terminal phalanges of all fingers on both hands, except middle finger of left hand, and that has been slightly affected. The same is true of the toes, and one leg was amputated above the knee at an early stage of the disease when the true nature of the affection was not recognized. Marked improvement followed surgical intervention but the fingers became affected two years later. Since then recurrences were inevitable, one or two attacks occurring each year. Heredity is suggested as an etiologic factor. Drugs seem of little value in treatment, except for relief of pain. Despite the partial loss of all extremities, this patient is able partly to earn his living as a shoemaker, but excessive use of his fingers predisposes to a recurrence.

The Successful Removal of Two Pieces of Steel from the Eye by Electromagnet

DR. CHARLES W. KOLLOCK, Charleston: These two cases were seen within eight days of each other. In the first the eye was seen about an hour after the accident had occurred. The fragment had flown from the top of a cold chisel, struck the cornea near its center, passed through the lens into the vitreous and wounded the pupillary edge of the iris in its flight. As the wound was open and recent an examination with the *x*-ray was not waited for. The point of the Parker magnet was held near the cornea and immediately the piece of steel slipped out. In two months the eye had become quiet, the lens had been absorbed and a little sight remained. A later examination showed that there was no vision, but the eye was quiet and painless.

The second case was seen about four hours after the injury had been received. The foreign body had passed through the center of the cornea, pierced the lens and rested partly in the lens and vitreous humor. It could be indistinctly seen in this position. The magnet held near the wound again easily drew the fragment from its resting place. There was a mild infection of the wound in this case as it was fully four hours after the accident occurred before it was seen. The man was a locomotive engineer and ran his engine a hundred miles with the eye exposed in its wounded condition. Nearly three months elapsed before the eye became quiet. A little vision remains in this eye which might be improved by clearing the pupillary space.

Complications and Sequelæ of Gall-Bladder Diseases as the Result of Delayed Diagnosis

DR. LEGRAND GUERRY, Columbia: Within the last month I have operated in five cases of gall-stones, in which the patients were over 65 years of age, three out of the five were 70 years of age; four out of the five had stones in the common duct, and one an advanced interstitial pancreatis. Jaundice is not a symptom of gall-stones. We do not have jaundice as a symptom until the common duct is involved. We must have obstruction of the choledochus somewhere to produce jaundice. Jaundice in gall-stones means that we have entered upon the second stage of the disease and instead of having simple stones in the gall-bladder to deal with, we have also a serious trouble of an obstructed and infected choledochus, which runs the mortality from one-half of 1 per cent. to 10 per cent. The following is a case in point: A man, aged 67, for fifteen years complained of indigestion. This was followed by numerous attacks of bilious colic (whatever that is) which would recur two or three times every year. There was a gradual failing in both appetite and health. Eleven months ago, severe attack of colic occurred, with high fever, sweats and point of tenderness. Profound jaundice developed, which led ultimately to diagnosis of gall-stones. Upon operation several hundred stones were found, with more pus; several stones of large size in the choledochus. As the result of the long continued absorption of toxins and cholemia, he probably had a myocarditis, nephritis, and undermined nervous system, with extremely low resistance. Operation showed a very large head of the pancreas. (In 27 per cent. of the common duct cases there are pancreatic complications.) Three weeks after operation patient was convalescent, when pulse began to rise and he died in seven days. Such cases show that we can remove the gall-stones, but not the kidney, heart and other complications—the result of procrastination and delay. If the symptoms in any given case do not demand intervention, they demand the very strongest possible reason for not interfering. We cannot, and we need never, expect success in the field of work if we wait until the symptom of jaundice is flung in our faces, and a diagnosis made as the man walks into the office. Jaundice, biliousness, indigestion and the other go-betweens for efficiency and sound knowledge should be expunged from the record, and an earnest effort made to place a true interpretation on symptoms. How often do we hear of innocent gall-stones? Innocent gall-stones, in our humble opinion, belong to the department of fiction, and instead of the stones being innocent, it is the innocent doctor.

Medical Inspection of Schools

Dr. William Weston (Chairman of the Legislative Committee): A bill to provide for a system of medical examination of school children and students attending public schools and colleges within the state is now on the calendar of both the Senate and the House. This bill has the endorsements of the committee on medical affairs, likewise the committee on education. The bill has also been recently endorsed by the State Teachers' Association and many other organized bodies. There is every reason to believe that the bill will be enacted into law at the next session of the legislature. The committee believes that it has, after studying the laws of the various states of the Union as well as those of foreign countries, formulated a bill which will be of unusual benefit to the schools of South Carolina.

ASSOCIATION OF AMERICAN PHYSICIANS

Twenty-Sixth Annual Meeting, held at Atlantic City, N. J., May 9-10, 1911

(Continued from page 1606)

Conjugal Tabes Dorsalis

Dr. A. A. Eshner, Philadelphia: Sometimes several members of a family develop tabes or paresis, sometimes husband and wife, sometimes in addition a second husband or wife, sometimes one or both parents together with one or more children. The association is not common, although probably more so than is apparent. When husband and wife suffer, the former generally is attacked first. In one of my cases the symptoms appeared in husband and wife at about the same time. No history of syphilis was elicited, although infection may have occurred. In the second case it was learned incidentally that the husband of a woman who was under treatment for tabes likewise presented symptoms of the same disease, although he insisted that there was nothing wrong with him and declined treatment; he gave a history of an initial lesion.

Acute Dilatation of the Stomach in Pneumonia

Dr. M. H. Fussell, Philadelphia: Acute dilatation of the stomach is a real complication or sequel to pneumonia fraught with great danger to the patient, usually easily relieved and generally unrecognized. Eleven cases have thus far been reported, including my own. In cases which have come to autopsy there has been found constriction of the duodenum at the root of the mesentery. The question as to which is primary, the duodenal obstruction or the dilated stomach, is still undecided. I believe that in these pneumonia cases there is an involvement of the innervation leading to dilatation, this dilatation in itself causing by traction a constriction of the duodenum. Unquestionably there are some cases with chronic dilatation which develop acute symptoms. The symptoms are vomiting, abdominal pain, distention due to enlarged stomach, constipation, collapse, splashing sounds, peristaltic movement over the stomach. Lavage brings great relief and, if dilatation has occurred after the crisis, recovery is almost certain to occur. Lavage must be done as often as distention occurs. When the patient is in collapse it is feared that passage of the tube may be fatal. This is a mistake, for the tube is easily passed and relief is marked. By turning the patient on his side or abdomen the constriction of the duodenum is relieved. Food and drink must be interdicted. Strychnin and physostigmin (eserin) are of value.

DISCUSSION

Dr. C. G. Stockton, Buffalo: The most striking case I have ever seen was one of acute dilatation in a child of nine years. The size of the stomach was unbelievable. It was undoubtedly acute. I think that dilatation does occur in pneumonia more than we realize. I have seen it in two other cases of pneumonia.

Dr. C. N. B. Camac, New York: It has been suggested, and some of the autopsies tend to support that idea, that the dilatation may possibly be brought on by involvement of the vagus by mediastinal exudate associated with pneumonia. In some of the cases there was at autopsy very extensive dilatation. It was almost altogether in lower lobe pneumonia.

Dr. S. J. Meltzer, New York: Pneumonia produces very often a dyspnea and frequent swallowing without any saliva. It is possible that the presence of air thus swallowed may be a factor in the production of dilatation.

Comparative Toxicity of Various Alcoholic Beverages

Dr. Julius Friedenwald, Baltimore: Experimentally I found that pure alcohol is less toxic than inferior whisky, and good whisky less toxic than inferior whisky, but more toxic than pure alcohol. Brandy is more toxic than alcohol or whisky, and genuine brandy just as toxic as ordinary brandy. Rum is more toxic than alcohol, whisky or brandy, and gin more toxic than pure alcohol. Liqueurs are more toxic than pure alcohol, whisky or brandy, and just as toxic as rum. Beer is but slightly more toxic than pure alcohol, and ale is no more toxic than beer, but more toxic than pure alcohol. Wine is more toxic than alcohol or whisky, and red wines are more toxic than white wines.

DISCUSSION

Dr. G. M. Kober, Washington, D. C.: Did Dr. Friedenwald estimate the amount of fusel oil present before injecting? My impression is that whenever the amount of fusel oil exceeds 1 part to 1,000 it is toxic.

Dr. V. C. Vaughan, Ann Arbor, Mich.: The fact that a substance proves poisonous when introduced intravenously does not say that it will prove poisonous when given by the stomach. I do not think his investigations have taken into account this relative toxicity.

Dr. J. Friedenwald, Baltimore: I did not estimate the amount of fusel oil before injection. It is difficult, of course, to draw any conclusion from a small number of experiments of this kind. This was a little bit of work done experimentally on rabbits to obtain the pathologic effect of alcohol on them.

Two Cases of Leukemia with Disease of the Gums

Dr. Henry Jackson, Boston: These two cases are of especial interest in that the chief symptom in each case was due to disease localized in the gums. The gums were much thickened, measuring 1 inch in cross section; along the edge was superficial ulceration, and they bled easily when touched. Both cases were considered as some local disturbance of the gums and mouth until the blood examination made the diagnosis possible. The first case is one of acute lymphatic leukemia. As the glands were not enlarged in the first part of the disease this case suggests that the cause of the leukemia is to be sought in the bone marrow, rather than in a disturbed function of the lymphatic glands. This supposition is further substantiated in that though most of the cells were typical large lymphocytes, some of them were very similar to myelocytes, as granules were present in the cell substance. The second patient was a man 36 years of age, a dentist. Swelling of the submaxillary glands was soon followed by swelling of the cervical glands and gums; gums tender, hemorrhage; chief complaint great weakness. He was admitted with a diagnosis of scurvy. In this case the first impression of the stained specimen suggested an acute lymphatic leukemia, but the granules showed the cells to be abnormal myelocytes.

DISCUSSION

Dr. R. C. Cabot, Boston: It seems to me we have more difficulties as years go on in a fair demarcation of the clinical picture of acute lymphoid leukemia from the clinical point of view. It has always been an occasional stumbling-block that certain cases of whooping-cough have such an enormous number of lymphocytes and there are several instances of supposed leukemias reported recovered which were obviously whooping-cough. There is another difficulty, namely, a septic lymphocytosis.

Dr. Henry Koplik, New York: Most men working among children feel that the blood picture in children can scarcely be compared with that of the adult. Anemias in children so closely simulate leukemias in the adult that one must be cautious in speaking of lymphatic leukemia.

(To be continued)

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

Journal of Medical Research, Boston

April

1 *A New Type of Cell Inclusion, not Parasitic, Associated with Disseminated Granulomatous Lesions. S. B. Wolbach, Boston.
2 *Nature of Trachoma Bodies. S. B. Wolbach, Boston, and S. H. McKee, Montreal.
3 Studies on Bacterial Variation. L. F. Rettger and J. L. Sherrick, New Haven, Conn.
4 A Chemical Study of Human Sweat. L. W. Riggs, New York.
5 Two Cases of Tumor Metastases Involving the Parathyroid Glandules. R. L. Thompson, St. Louis.
6 *Accessory Thyroid Tissue Within the Pericardium of the Dog. J. L. Swarts and R. L. Thompson, St. Louis.
7 *Recuperation of Nerve-Cells After Functional Activity from Youth to Senility. D. H. Dolley, Columbia, Mo.
8 *Study of the Hemopoietic Serum of Carnot. R. C. Larrabee, Boston.
9 *Studies in Immunity to Tuberculosis. A. K. Krause.
10 Biology and Biochemistry of Bacteria and Their Relation to Therapeutics. A. I. Kendall, Boston.
11 *Pathologic Changes Which Develop in the Kidney as a Result of Occlusion by Ligature of One Branch of the Renal Artery. W. DeB. MacNider, Chapel Hill, N. C.
12 Chronic Passive Congestion of the Liver. F. B. Mallory, Boston.

1. A New Type of Cell Inclusion.—In five human cases Wolbach found peculiar and striking cell inclusions. Four of these cases occurred in a series of nine hundred necropsies. The lesions have considerable resemblance to miliary tubercles. They consist at first of groups of epithelioid cells and giant cells. Later, a proliferation of connective tissue takes place, which leads to a fibrous tissue focus surrounding the giant cells. Extensive necrosis or caseation does not occur. Complete cicatrization is the rule. The inclusions are made up of two materials with different staining reactions. The type structure is that of a central mass with radiating straight or spinous projections. They bear a superficial resemblance to forms assumed by the acid-fast bacteria, including the tubercle bacillus, following certain methods of inoculations, and to the capsular material with spinous projections occasionally encountered in experimental lesions produced by certain fungi. They are found most often in giant-cells. The smaller forms are often found within endothelial leukocytes and occasionally within endothelial cells, which are attached to the walls of the lymph-spaces. Rarely the inclusions have been found free within the sinuses of lymph-nodes. The lesions in which these inclusions occur have been found in lymph-nodes, spleen, liver and lung. The most striking feature in the consideration of the lesions in which the inclusions occur is the wide distribution throughout the body. Tuberculosis has been excluded, as far as a most painstaking search for tubercle bacilli can exclude tuberculosis; also none of these cases show a typical tuberculous lesion in any part of the body. According to Wolbach the most important deduction to be made from this study is that it is a hitherto undescribed, generalized process of non-infectious origin.

2. Nature of Trachoma Bodies.—Wolbach and McKee hold that trachoma bodies are not specific of trachoma, nor are they parasitic in nature. In sections, they are found only in the most injured portions of the epithelium, where typical mucus-secreting cells are absent. On the other hand, in the more normal portions of the epithelium, where mucous cells are present, trachoma bodies cannot be found. Granules identical in size and staining reaction with the red granules of trachoma bodies may be found in disturbed mucous secretion. The so-called plastin material of trachoma bodies is similar in staining reaction and arrangement with certain forms of mucous secretion. The authors have come to the conclusion that trachoma bodies are the product of mucous secretion under pathologic conditions.

6. Accessory Thyroid Tissue of the Dog.—Of twenty-four animals showing pericardial thyroids, the structure of these bodies corresponded almost identically with the structure of the thyroid gland of the same animal in twenty-one instances. The exceptions were in two colloid goiter dogs which showed normal pericardial thyroids and in one animal with hyperplastic thyroid which showed a normal pericardial thyroid. In the limited amount of human material so far examined, Swarts and Thompson have failed to find thyroid tissue within the pericardium.

7. Recuperation of Nerve Cells.—The following conclusions are deduced by Dolley from the nature of the anatomic reaction in the Purkinje cell and the differential counts for the different animals.

1. To the end of its life-cycle the cell continues to react and there is manifest the attempt toward reorganization and restoration.
2. The power of recuperation is an inherent capacity, varying in each individual after the same degree of exhaustion.
3. The equipment of chromatin affords a valuable index of the power of the cell taken by itself and of the capacity of the individual when taken collectively. In the poorest recoveries the chromatin was more scanty and more delayed in restoration; in the best it was more rapid and tended to swing back to a more distinct excess as compared with an average.
4. Very young puppies show a greater and more wide-spread reaction to a given strain than adult dogs and recover from it more slowly.
5. The best recovery was in the dog which was in the best state of training.
6. The process of recuperation after exhausting activity is slow. After a physical overstrain of the kind employed complete recovery could not be expected in the best subject under two weeks, while the least capable subject used shows that it may be a matter of several months, or likely longer.
7. There is a wide range of anatomic states in different though apparently normal animals under the same external conditions.
8. Natural senescence and natural death, from the point of view of the nerve-cell, may happen independently of any extraneous cause whatsoever and are the inevitable final result of its natural activities. The morphologic price of activity is age.
9. Premature senility is the certain outcome of the injudicious and extravagant expenditure of energy without adequate chance for rest and recuperation.

8. Hemopoietic Serum of Carnot.—Larrabee was unable to verify the work of Carnot either experimentally or clinically.

On the experimental side the results were wholly negative, the average change in the red corpuscles after "hemopoietic serum" being a slight decrease. In a number of instances the injection of the serum was followed by considerable changes, never so great as those observed by the French writers, and apparently representing merely normal fluctuations. The latter were shown, in a few animals, to be much more marked than is commonly supposed. The serum was administered to eleven patients with anemia of various sorts. In three there was an immediate increase of red corpuscles exceeding 250,000, the maximum being 828,000. All were in post-hemorrhagic anemias.

9. **Immunity to Tuberculosis.**—As a result of his experiments, the following conclusions are drawn by Krause:

1. Sensitization of non-tuberculous guinea-pigs with tuberculoprotein does not alter their resistance to experimental tuberculous infection.
2. Sensitization to tuberculoprotein and relative immunity (increased resistance) to infection can occur coincidently in the same animals.
3. Resistance to infection is markedly lowered during the period that a sensitized animal is suffering from symptoms of anaphylactic shock.

11. **Pathologic Changes in the Kidney.**—Ligature of the posterior branch of the renal artery, MacNider says, leads to a necrosis of the greater portion of the cortex and the superficial portion of the medulla of approximately the posterior one-third of the kidney. An imperfect anastomosis between the vessels of the two vascular zones of the kidney is possible and does develop. With the development of the anastomosis there is at first an ingrowth of connective tissue cells into the necrotic zone, followed by an ingrowth of renal epithelium. Some of the glomeruli are regenerated by an ingrowth of capillary buds which later become canalized and contain blood. A secondary fibrosis is inaugurated, and with its development there is an atrophy of renal tubules, fibrosis of the glomeruli and obliterative changes in the vessels. The resulting picture is comparable to a chronic interstitial nephritis.

American Journal of Diseases of Children, Chicago

May

13 *Studies on Infant Nutrition: 1. Metabolism in Chronic Malnutrition. A. M. Courtney, New York.
14 *Etiology and Nature of Hard Curds in Infants' Stools. J. Brennemann, Chicago.
15 A Duodenal Tube for Infants. A. F. Hess, New York.
16 Spasm of the Pylorus in Infancy. J. L. Morse, Boston.
17 Blood Transfusion in Infants by Means of Glass Tubes. B. Vincent, Boston.

13. **Metabolism in Chronic Malnutrition.**—A summary of the analysis of the behavior of fat in patients under observation by Courtney brings to light the following peculiarities in the effect produced by fat intake. In all patients it undoubtedly produced an increased peristalsis of the small intestines. Whether this effect was produced by the fat independently, or whether the fat facilitates the similar action of the carbohydrates can for the present not be stated with a degree of certainty. The increased peristalsis results in a fall of fat absorption and, in an abnormal composition of the feces, which expresses itself in a high content of insoluble soap. However, the lack of fat absorption and the withdrawal of mineral bases by the unabsorbed fat did not reach a sufficient degree of intensity to be regarded as very important factors in causing the defective nutrition noted in the patients. On the other hand, the fat of the food failed to produce the principal effect that it invariably causes in health. Namely, it failed to bring about in connection with the carbohydrate of the food the normal gain in weight in the patients, who did not suffer from any difficulty in nitrogen assimilation, and whose diet contained a sufficient amount of calories for normal growth.

14. **Etiology of Hard Curds in Infant's Stools.**—The principal point emphasized by Brennemann is that when he resorted to the time-honored expedient of boiling the milk, he found almost without exception that the digestion improved, and that without any exception the hard curds disappeared within a day or two without otherwise altering the food. In all his experiences he has never seen a hard curd unless a considerable amount of raw milk casein was given, and he has never seen curds persist or occur when boiled milk, no matter in what amount, was given. He also points out that certain very diverse foods, commonly recognized as easily digested foods, such as buttermilk, condensed milk, dried milks, sodium citrated or otherwise alkalinized milks, all have one thing in common—they do not curdle in hard masses as raw milk does. On the other hand, it is certainly a question whether the use of rennin, as in pegnin or chymogen, has decided, or, indeed, any advantages when the milk is previously boiled, over boiled milk itself; and when not boiled the result is not satisfactory because of the toughness of the small curds that are formed. Even in the preparation of "eiweissmilch," with raw and boiled milk, respectively, there is an appreciable difference in the consistency and amount of the curd and the amount of whey extracted; hence a difference in the ultimate food itself in the very respect that makes it unique and effective as a therapeutic measure. He who uses raw "eiweissmilch" will get very different results from another who uses boiled milk in its preparation.

Medical Record, New York

May 13

18 Mistakes in Diagnosis of Chronic Lesions. W. A. Bartlett, New York.
19 *Prevention of Insanity: Hygiene of the Mind. A. J. Rosanoff, Kings Park, N. Y.
20 *Etiology of Pancreatic Disease. J. E. Davis, Detroit.
21 Ocular Manifestations of the Peripheral Affections of the Fifth Cranial Nerve. G. H. Bell, New York.
22 *Chlorids, Phosphates and Sulphates of the Urine in Last Stage of Pulmonary Tuberculosis. J. C. Warbrick, Chicago.
23 Postoperative Urinary Incontinence. J. B. Squier, New York.
24 Short Talks with My Students and Others: Being Random Suggestions for the Younger Practitioners. R. H. M. Dawbarn, New York.
25 *Acute Tonsillitis and Its Treatment. H. Hays, New York.

May 20

26 Random Recollections of a Long Medical Life. S. Smith, New York.
27 *Diagnosis of Cancer of the Uterus. E. Atlee, Philadelphia.
28 Holzknecht's Method for Measuring Dose of Roentgen Rays. J. B. Stern, New York.
29 *Comparative Longevity of the Sexes. A. H. Stewart, Lawton, Okla.
30 Segregation and Education of Children Affected with Ring-Worm of the Scalp. U. J. Wile, New York.
31 Two Cases of Gastric Ulcer Due to Diseased Gall-Bladder and Appendix. A. Judd, New York.
32 *Prognosis of Lobar Pneumonia. T. F. Reilly, New York.

19. **Prevention of Insanity.**—Rosanoff presents a certain modern standpoint of the etiology of insanity and a review of measures of prevention which have been practiced with some degree of success and which may, therefore, be recommended for general adoption.

20. **Etiology of Pancreatic Diseases.**—During the past year Davis has observed and treated one case of carcinoma and three of diabetes mellitus in which functional tests pointed to involvement of the pancreas. Advantage was frequently taken of the test findings and adjustment made in the quantitative relations of the fat, protein and carbohydrate. The results have been convincing that very marked relief was consequently afforded; furthermore, in two of the cases which have resulted fatally, prolongation of life was very evident.

22. **Chlorids, Phosphates and Sulphates of the Urine in Pulmonary Tuberculosis.**—Warbrick states that the changes in the chlorids, phosphates and sulphates in the last stages of pulmonary tuberculosis are not as great as would be expected in the last part of a wasting disease. The chlorids are somewhat increased, but this might be accounted for by the large amount of food that must be taken to keep up repair. The phosphates are sometimes increased also. The sulphates were found to be increased in three examinations of the urine.

25. **Acute Tonsillitis and Its Treatment.**—Hays recommends the treatment of tonsillitis by means of a 50 per cent. silver nitrate solution, after thorough anesthetization of the tonsil with cocain. The silver is applied to the opening of each crypt, and the patient afterward uses a spray of peroxid of hydrogen.

27. **Diagnosis of Cancer of Uterus.**—The relation of body weight to early diagnosis is the point discussed by Atlee, who maintains that the point of importance to be considered is,

not actual weight of the individual, but comparative weight of that individual at different periods. The actual maximum weight of the constitutionally light woman can but differ greatly from the actual maximum weight of the constitutionally heavy woman.

In the furtherance of this research, twenty-four cases have been carefully studied by Atlee and the evidence obtained is interpreted to point almost conclusively one way, viz., that the incipient stage of cancer of the uterus is coincident with the maximum weight of the woman, irrespective of age; and that the duration of this incipient stage may vary, as does that of the recognized stage of the disease.

29. **Comparative Longevity of the Sexes.**—A statistical study made by Stewart shows that there is a great preponderance of women in the older population, and the greater the age the greater is this preponderance. After making all due allowances for the greater mortality of man in war and from accidents from dangerous occupations and from masculine excesses Stewart feels that there are good reasons for believing that nothing short of a constitutional difference can account for the greater tenacity of life in women. Woman is a physiologic miser, she accumulates energy without expending it, while man is a physiologic prodigal; he expends more energy than he accumulates.

32. **Prognosis of Lobar Penumonia.**—The two general conditions, Riley says, which betoken an approaching dissolution in most cases are the presence of the so-called Romberg Passler syndrome, and, second, the failure of the right heart. In the first instance, the dilatation of the blood-vessels in the splanchnic area causes the normally low blood-pressure to sink much lower; this is accompanied by an increased rapidity of the heart. Shortly afterwards tympanitis becomes a marked symptom. The patient then looks as though he had been bled excessively. He has the appearance of profound shock; the pulse becomes irregular and this is often followed by delirium, hallucinations, restlessness and later stupor and coma; although occasionally the heart becomes much slower, the patient invariably dies when this symptom is well developed. In the second class the patient is cyanotic and there is great dyspnea, the jugulars are full and pulsating, the heart dulness is sometimes increased to the right, and the liver dulness almost always increased. Occasionally such a patient is saved; they usually die of asphyxia. When death has begun, the earliest indication of which is an increasing dyspnea, and a rattle with each respiration, which persists after coughing, recovery is unlikely. Riley says it would be difficult to get a unanimous opinion among any group of medical men of the present day that any form of treatment has any specific value as a cure of pneumonia. Personal views as to their ability to alter the prognosis by this or that treatment will always prevail. Certainly the prognosis can be influenced by the treatment and prevention of symptoms, complications, and sequelæ, but it is difficult to measure this in a concrete way. Last, but by no means least, in making a prognosis we must take into account the mental attitude of the patient. Hopefulness, determination to win, and patience sometimes prevail when there does not seem to be a glimmer of hope. These mental phenomena cannot be measured, but, when coupled with confidence in the physician, undoubtedly have a favorable influence. Possibly the loss of this personal confidence in the physician is an added factor in the high mortality in hospital practice.

American Journal of Urology, New York

April

33 Phenolsulphonephthalein as Test for Renal Function Before Operation. E. L. Keyes, Jr., New York.
34 Value of Vaccines in the Treatment of Infections of the Urinary Tract. H. Cabot, Boston.
35 Time and Method for Prostatectomy. B. Tenney, Boston.
36 Some Untoward Consequences of Phimosis and of Circumcision. G. H. Edington, Glasgow.
37 Perineal Prostatectomy. A. H. Ferguson.

Kentucky Medical Journal, Bowling Green, Ky.

May

38 *Rheumatic Eye Disease. S. G. Dabney, Louisville.
39 Ectopic Gestation. H. A. Davidson, Louisville.

38. **Rheumatic Eye Disease.**—Hot applications to the eye are believed, by Dabney, to be generally useful. In iritis, atropin is the mainstay while leeches and dionin are often useful. He uses the dionin in 10 per cent. solution; it allays pain for a considerable time and is said to promote the absorption of the atropin. Dabney is under the impression that the profession underrates the value of frequent sweat baths. He says that elimination by this means and by frequent systematic muscular exercise combined with careful avoidance of constipation, are all important measures.

Journal of Nervous and Mental Diseases, New York

May

40 Growth Changes in the Nervous System. H. H. Donaldson.
41 A Case of Cerebral Decompression of Five Years' Standing, in Which a Large Cerebral Hernia Has Resulted, with Marked Improvement in Optic Neuritis. J. H. Lloyd, Philadelphia, and J. M. Spellissy, Philadelphia.
42 *Study of Heredity in Insanity in Light of Mendelian Laws. G. L. Cannon and A. J. Rosanoff, New York.

42. **Heredity in Insanity.**—The material on which the authors made their observations consists of the pedigrees of eleven patients and includes thirty-five different matings, a total of 221 offspring. They found that both parents being neuropathic, all children will be neuropathic. One parent being normal, but with the neuropathic taint from one parent, and the other parent being neuropathic, half the children will be neuropathic and half will be normal, but capable of transmitting the neuropathic make-up to their progeny. Both parents being normal but each with the neuropathic taint from one parent, one-fourth of the children will be normal and not capable of transmitting the neuropathic make-up to their progeny, one-half will be normal but capable of transmitting the neuropathic make-up, and the remaining one-fourth will be neuropathic. Both parents being normal, one of pure normal ancestry and the other with the neuropathic taint from one parent, all the children will be normal, half of them will be capable and half incapable of transmitting the neuropathic make-up to their progeny. Both parents being normal and of pure normal ancestry, all children will be normal and not capable of transmitting the neuropathic make-up to their progeny.

Annals of Surgery, Philadelphia

May

43 Recent Advances in Pulmonary Surgery. J. H. Jopson, Philadelphia.
44 *Injury as a Causative Factor in Cancer. W. B. Coley, New York.
45 *Acute Ulcer Peritonitis in Typhoid. F. Hawkes, New York.
46 *Radical Cure of Femoral Hernia in the Aged. P. M. Pilcher, Brooklyn, N. Y.
47 Acute Diverticulitis. H. A. Bruce, Toronto, Canada.
48 Appendicostomy to Safeguard the Excluded Colon in Lane's Operation for Chronic Intestinal Stasis. A. E. Rockey, Portland, Ore.
49 Case of Chylous Cysts of the Mesentery. W. H. Axtell, Bellingham, Wash.
50 Removal of the Ureter with a Tuberculous Kidney. G. E. Shoemaker, Philadelphia.
51 Use of the Moorhof Bone Plug in [illegible] the University of Minnesota. J. C. [illegible]
52 *Use of Scarlet Red and Amidoazo [illegible] the Epitheliation of Granulating Sur[illegible] [illegible]altimore.
53 An Improved Device for Transfusion. H. H. Janeway, New York.

44. **Injury as Causative Factor in Cancer.**—A careful study of over 1,200 personal observations has convinced Coley that local trauma of any kind, from chronic irritation to a single local contusion, is not infrequently the direct exciting cause of malignant tumors of all types. That a single local injury may cause a carcinoma as well as a sarcoma, is no longer open to speculation. Coley believes that his cases fulfil all the conditions necessary to establish a definite causal relationship between a single trauma and the development of a cancer. This relationship in no way depends on ability to offer a scientific explanation of it; nor does it depend on the acceptance of any one of the various hypotheses as to the etiology of cancer. It can equally well be explained whether we accept the extrinsic or intrinsic origin of malignant tumors.

45. **Typhoid Ulcer Peritonitis.**—Hawkes claims that early operation is not usually suggested in these cases because the diagnostic value of abdominal rigidity at its first appearance is not appreciated, and that on this account a persistent

search for it is not made from the time that the patient begins to suffer from abdominal discomfort. The records show that it is only recognized, as a rule, when marked pain is complained of, and unless other alarming symptoms are present, the case is, unfortunately, too often watched until the rigidity becomes general and a spreading peritonitis has become well established. He believes that enough evidence is at hand to justify the statement that an early exploratory operation exerts a distinctly beneficial influence, not only on ulcers that may be about to break down but on others as well, thus preventing their further progress toward separate perforations, a condition recognized as almost invariably fatal.

46. **Femoral Hernia in the Aged.**—The radical cure of femoral hernia in the aged which Pilcher advocates consists of the following steps: (1) Intracutaneous injection of .2 per cent. solution of cocain along the line of incision. (2) Incision, enucleation of the sac, and exposure of the femoral ring. (3) Opening the sac and inspection of the contents, incision of point of constriction, and return of intestines to abdominal cavity. (4) Transfixation and ligature of the neck of the sac with a single ligature, and fixation of the stump of the sac to the abdominal wall above the femoral ring. (5) Single purse-string suture uniting Poupart's ligament, Gimbernat's ligament, the pectineal muscle and the sheath of the femoral vessels, obliterating the patency of femoral canal. (6) Closure of the wound with interrupted silk sutures, without drainage.

52. **Scarlet Red Dressing of Ulcers.**—Davis says that scarlet red and amidoazotoluol will not heal every wound, but in the majority of cases, when applied with the proper technic, they will cause epithelial stimulation in the edges of the most sluggish wounds, and give a rapid healing which is stable and resistant, and which has the macroscopic and microscopic appearance of the normal skin. There is no tendency to subsequent contraction, and the skin becomes movable on the underlying tissues in a reasonable time. The consensus of opinion is that there is no danger of producing malignant growths by the clinical use of these substances. Davis' experience has convinced him of this, and, he says, although occasionally there is an overgrowth of epithelium, this soon assumes the level and the appearance of the normal skin.

Journal of the American Public Health Association, Urbana, Ill.

April

54 Further Contribution to Our Knowledge of Insecticides. C. T. McClintock, H. C. Hamilton and F. B. Lowe, Detroit.

Boston Medical and Surgical Journal

May 11

55 *Experimental Work on Fusion of Nerves and Its Practical Bearing on Infantile Paralysis. H. O. Feiss, Cleveland.
56 Case of Hemiatrophy from Scleroderma. P. C. Knapp, Boston.
57 The Towns-Lambert Treatment for Morphinism and Alcoholism. R. C. Cabot, Boston.
58 *Review of Two Hundred and Fourteen Cases of Extra-Uterine Pregnancy at the Massachusetts General Hospital. W. P. Coues, Boston.

May 18

59 Meningitis in Infancy. J. L. Morse, Boston.
60 Complete Rupture of the Supraspinatus Tendon. Operative Treatment with Report of Two Successful Cases. E. A. Codman, Philadelphia.
61 Intussusception in Children. J. H. Young, Newton.
62 Treatment of Intussusception in Children. W. E. Ladd, Boston.

55. **Fusion of Nerves.**—Nerve "fusion" is nothing more nor less than a method which attempts to render permanent the arrangement of the fibers in that stage of regeneration when they run in more than one direction. It is a method for taking advantage of the confused nerve pattern of the scar in the transitory stage and fixing that pattern in the hope that, when regeneration is finally completed, the fibers will have grown down different tracts from those which they originally occupied, thus defeating chemotaxis. So in a case of paralysis, if some of the fibers in the nerve are degenerated and their sheaths are empty, the question arises whether the interposition of a proper scar in the course of that nerve may distort its nerve pattern so as to enable the empty tracts to become occupied again with new fibers. Not only this, but also whether some of the branches that form on the sprouting ends of the divided axis-cylinders may also be made to enter tracts which have previously been empty, thus gaining not only a new distribution of fibers, but also an actually greater number. In this preliminary report, Feiss details the method of procedure adopted by him, and also reports one instance in which it was used on the human. But not sufficient time has elapsed to make a final report.

58. **Extrauterine Pregnancy.**—The conclusions arrived at by Coues from a study of these 214 cases are as follows:

1. Irregular flowing seems to play the important part given it in the books as a symptom of extra-uterine pregnancy.
2. The importance of a long period of sterility as a cause of extra-uterine pregnancy does not seem to be borne out by these statistics.
3. Conditions possibly leading to extra-uterine pregnancy: The fact that cystic ovaries, disease of the opposite tube, adhesions or a previous miscarriage occurred in over 83 per cent. of 202 cases is suggestive, and is in agreement with authorities as to the possible relation of such conditions to extra-uterine pregnancy.
4. The fact that in only 26.5 per cent. of 207 cases the pain was sudden is of interest. In about three-fourths of the cases the sudden, severe pain was preceded by pain of less severity, coming on gradually.
5. Of considerable interest is the leukocytosis observed in the cases in shock. This is apparently a perfect example of leukocytosis after hemorrhage. The finding of a temperature of 100 or over in 43.4 per cent. of the cases, and of a temperature of 101 or over in 14.4 per cent. of cases, is also of interest. Ordinarily it is supposed these cases rarely have any fever.
6. Active hemorrhage at operation. Some observers with much experience in this subject say that active hemorrhage actually seen at operation occurs so rarely as to be practically negligible. It occurred in 4.4 per cent. of all the cases operated on. It is possible that the hemorrhage was in some cases started up by operative manipulation.
7. Immediate vs. delayed operation.

These statistics, Coues points out, show that it is best to wait for a time before operating on patients in shock. Twenty-five per cent. mortality of those operated on in shock, 8.3 per cent. mortality of those for whom the operation was delayed for a time. Active stimulation and blood-pressure-raising drugs seem to be best given after the bleeding points in the tube are secured. Rest and morphia while waiting are most important. Waiting any length of time with a case of extrauterine pregnancy in good condition is dangerous, since it has been shown that bleeding may recur at any time, so that in a few hours the patient may be again in a desperate condition.

Quarterly Bulletin of Northwestern University Medical School, Chicago

April

63 *Improved Technic in Brain Surgery. E. W. Andrews, Chicago.
64 *Desmoid Tumors of the Abdominal Wall After Operation. E. W. Andrews, Chicago.
65 Methods of Testing the Mental Status of Subnormal Children. E. R. Shaw.
66 *Treatment of Puerperal Sepsis by Intravenous Injection of Mercuric Bichlorid. H. M. Stowe, Chicago.
67 Mild Traumatic Neuritis of Brachial Plexus. K. Speed, Chicago.
68 *Study of Forty-Seven Wassermann Reactions After Injection of Salvarsan. J. S. Eisenstaedt, Chicago.
69 *Peculiar Catheter Accident. V. D. Lespinasse, Chicago.
70 Pediatric Clinics of Europe. J. H. Hess, Chicago.
71 Movability of Heart and Aorta in Health, Evidenced by Skiagrams Taken in Unusual Positions. C. A. Elliott, Chicago.

63. **Improved Technic in Brain Surgery.**—Andrews cites a case in which he used glass tubes for subdural drainage of the lateral ventricles in a case of internal hydrocephalus. He says he is convinced that the use of a thin glass, rather than a metal, tube contributed not a little to the success of this interference. The smoother surface texture of glass and the lighter specific gravity probably contribute to this result. Skiagrams taken three years after the operation show the tube to have remained exactly where inserted, and the permanent cure speaks for its persistent utility.

64. **Desmoid Tumors of Abdominal Wall After Operation.**—Two cases, both following hernia operation, are reported by Andrews but one of these was not examined histologically, and was not seen by him before the mass had formed. It was possibly not a true desmoid, but a chronic ligneous abscess, like the "holzphlegmone" of the neck. He says that desmoid tumors should be removed by operation, inasmuch as the tendency is to grow larger and occasionally to start degenerative retrograde or malignant changes.

66. **Treatment of Puerperal Sepsis.**—Stowe has given 185 injections of 1/5 grain of mercuric bichlorid in septic cases

and has never seen any bad or toxic results therefrom. He says that intravenous medication appears to offer the quickest, most accurate and most dependable method of drug administration and that the reputed dangers of embolism are greatly overestimated. Mercuric bichlorid is not the ideal drug to combat septicemia, but it has the advantages of being easily associated with other forms of treatment, is harmless in action and is worthy of trial in serious cases. Care should be taken, however, to keep the teeth clean and to omit salines during the course of treatment.

68. **Wassermann Reactions After Injection of Salvarsan.**—The results of Eisenstaedt's study show that the injection of salvarsan in specific disease does not cause a rapid disappearance of the Wassermann reaction. Cases of latent syphilis, even after the injection of salvarsan, may show a positive reaction. Those cases of lues marked by dry lesions do not react as readily to salvarsan as those characterized by moist or succulent lesions, as judged by the effect on the Wassermann reaction. In those cases of primary lues, in which the patients were injected early with salvarsan, the Wassermann reaction may remain negative for relatively long periods. The injection of salvarsan late in the primary stage of syphilis does not seem to affect the appearance of the Wassermann reaction.

69. **Peculiar Catheter Accident.**—In this case the first loop of an ordinary knot had been tied in the catheter as the filiform coiled up in the bladder. The patient was quite sensitive and had several bladder spasms while the instrument was in place. Lespinasse suggests that probably during one of these spasms the end of the rat-tail of the catheter was crossed over the shaft, and a large loop was formed. This loop being drawn down to its present size by the traction and the resistance of the prostatic urethra. In this particular case no harm was done to the patient.

Philippine Journal of Science, Manila

December

72 *Experiment with Orange-Red Underwear. J. M. Phalen, U. S. A.
73 *Treatment of Strychnin Poisoning with Chloroform. A. O. Shaklee, Manila.
74 *Bone Lesions of Small-Pox. W. E. Musgrave and A. G. Sison, Manila.
75 *Specific Treatment of Leprosy. E. R. Whitmore and M. T. Clegg, Manila.
76 *Tuberculosis in the Philippines. E. R. Whitmore, Manila.
77 Therapeutic Inoculations of Bacterial Vaccines. E. R. Whitmore, Manila.

72. **Experiment with Orange-Red Underwear.**—As the result of very extensive experimentation and observation, Phalen's final judgement is that the test underclothing has added materially to the burden of heat on the system, a burden which undoubtedly is the great cause of tropical deterioration. To balance this, it is protective against the chemical ray, the influence of which is regarded as of little moment, and which is sufficiently excluded by khaki clothing and the campaign hat worn at present. Certainly no beneficial effect whatever was observed from the use of this clothing. This experiment suggests that any efforts toward increasing the physical well-being and efficiency of the soldier shall be directed toward protecting him from the debilitating effects of heat and humidity. After giving due weight to the prejudice against the clothing, the persistent complaints of greater heat, greater weight and increased perspiration lead Phalen to the conclusion that the *colored garments* are more receptive to heat rays than are the white.

73. **Chloroform in Strychnin Poisoning.**—Shaklee found that dogs poisoned with doses of strychnin which are certainly fatal may recover from the effects of the strychnin if properly treated with chloroform, together with the intravenous injection of liberal quantities of Ringer-Locke solution. Better results are obtained if the chloroform is given by intratracheal insufflation and in uniform concentration as low as consistent with the condition of the patient. Dogs saved from strychnin death by means of chloroform are likely to die later of chloroform poisoning. Chloroform is far inferior to ether for the treatment of strychnin poisoning, and probably for the treatment of convulsions in general.

74. **Bone Lesions of Small-Pox.**—The cases of eight patients who were suffering from deformities of the forearms and hands caused by small-pox contracted during childhood are reported by Musgrave and Sison. The deformity in nearly all the cases consisted of a shortening of both forearms together with enlargement and irregular development about the elbow joints, and irregular enlargements, shortening and other deformities of bones of the wrist, hands and fingers. The authors are of the opinion that the seat of the primary lesions is in that active part of the bone between the epiphysis and diaphysis which grows ex utero, and that the most probable cause of the deformity is primary inflammation and destruction of the secondary center of ossification situated between the epiphyses and diaphyses, resulting in premature ossification.

75. **Specific Treatment of Leprosy.**—Whitmore and Clegg have prepared a vaccine, a glycerin extract and a soap solution from an acid-fast bacillus which Clegg cultivated from leprous tissue. They have used these preparations in the treatment of cases of leprosy for twelve and one-half months, without noting any improvement in the condition of any of the patients. In some of the cases they have noted reactions after the injections, but they are not prepared to say whether or not these reactions are specific. The glycerin extract of this organism does not produce a skin reaction on leprous or tuberculous patients, nor on normal persons. They have treated these same leprous patients for two and one-half months with a soap solution of leprous spleen, rich in leprosy bacilli, without noting any improvement in the condition of the patients. They have treated cases of leprosy for eight months with injections of atoxyl and also with injections of a mixture of sodium cinnamate and mercury cinnamate, without noting any improvement in the patients. They have treated cases of leprosy for eight months wtih injections of Nastin B. These patients already had been treated with injections of Nastin B for nine months by Dr. Teague. At the end of the seventeen months no improvement was noted.

76. **Tuberculosis in the Philippines.**—The result of Whitmore's work seems to indicate that none of the specifics used by him were of especial value in the treatment of pulmonary tuberculosis in natives of the Philippines.

Providence Medical Journal

May

78 Acute Osteo-Arthritis of the Spine After Trauma in Osteo-Arthritic Patients. F. J. Cotton, Boston.

Lancet-Clinic, Cincinnati

May 13

79 Ocular Complications of Measles. L. D. Brose, Evansville.
80 *Blastomycosis. A. Ravogli, Cincinnati.
81 Ipecacuanha. W. E. Bloyer, Cincinnati.

80. **Blastomycosis.**—Iodid of potassium in blastomycetic dermatitis failed in all Ravogli's cases. He prefers the use of tonics. A mixture of arsenic and chlorid of iron has given better results. He relies on the local treatment. The scraping of the granulating surfaces with the sharp curette is necessary, and the raw surface is cauterized with pure lysol. The resulting wound is dressed with gauze saturated in castor oil and balsam of Peru in equal parts. When the small abscesses reappear the exposure to the Roentgen rays has given beneficial results. Ravogli says that perseverance and courage must be used to obtain success in this affection. It is difficult to rid the tissues of the spores budding in their midst, but with perseverance in continuous treatment, giving no quarter to the fungi, and with the use of strong, escharotic cauterizing antiseptics, he has obtained a permanent cure in two cases, and in one, although rather extensive, a marked improvement.

Canadian Medical Association Journal, Toronto

May

82 A Study of Eight Hundred and Fifty Cases of Scarlet Fever with a More Particular Consideration of Seventy-One Fatal Cases. J. McCrae, Montreal.
83 *Relation of the Thyroid to the Female Generative Organs. J. R. Goodall and L. C. Conn, Montreal.
84 Medical Inspection of Schools in All Countries. J. Stewart, Halifax.

83. **Relation of Thyroid and Female Generative Organs.**—Shortly after the onset of pelvic pain and discomfort, the patient noticed a gradual enlargement of her thyroid, dyspnea, tachycardia and other symptoms of thyroid disease. After a while an operation was done and when the abdomen was opened the pelvic disease proved to be a chronic tuberculosis, involving tubes, ovaries and uterus extensively. All these organs were removed. About twelve days after the operation, the authors noted that the thyroid was decreasing in size. This continued and six months after the operation the woman was entirely well. The thyroid had enlarged synchronously with the onset and progress of a grave disease of the generative organs, and with the removal of the pelvic disease the goiter visibly diminished to dimensions below the normal. The authors believe that there can be no hesitation, then, in claiming that the pelvic disease was the cause and the thyroid enlargement the effect. This led them to investigate the subject further, clinically and experimentally, and the following conclusions represent the results of this work:

1. The relation between the female genitals and the thyroid is very intimate.
2. The generative organs which stand in such close relation with the thyroid are the ovaries.
3. That the uterus is devoid of any influence on thyroid activity, except in that its function may affect the ovarian function, and through this the thyroid.
4. Thyroid activity is in a measure under the governance of ovarian activity.
5. Ovarian hyperactivity is a frequent cause of the development of exophthalmic goiter.
6. Diminished or absent ovarian activity usually coincides with *myxedema*.
7. Puberty, menstruation, pregnancy, lactation and menopause exercise a profound influence on thyroid secretion.
8. Thyroid secretion and ovarian secretion do not supplement each other; they neutralize each other.
9. The ovary has two secreting structures—the corpora lutea and the interstitial cells.
10. It is the secretions from the latter which seem to bring the ovary and thyroid into such close relation.

Ophthalmology, Seattle, Wash.

April

85 Incipient Glaucoma, Its Diagnosis and Treatment. A. A. Bradburne, Southport, England.
86 Operation of Simple Trephining of the Sclera for the Relief of Glaucoma. R. H. Elliot, Madras, India.
87 Arterial Hypertension and Its Relation to Morbid Changes in the Eye. L. C. Peter, Philadelphia.
88 Eye Tuberculosis and Its Treatment. J. E. Windbiel, Amsterdam, N. Y.
89 Bilateral Partial Tenotomy, with a Greek Cross Test-Object for Use During Operation. S. L. Ziegler, Philadelphia.
90 Extractum Corporis Ciliaris in the Treatment of Sympathetic Ophthalmia. E. B. Heckel, Pittsburg, Pa.
91 Visual Malingering. H. V. Würdemann, Seattle, Wash.
92 A Case of Varix or Angioma Venosum of the Orbit. J. F. Klinedinst, York, Pa.
93 Relation of the Anterior Ethmoid Region to Diseases of the Eyes. J. I. Dowling, Albany, N. Y.
94 A Case of Infection Following Cataract Extraction Treated by Vaccines, with Rapid Recovery. R. P. O'Connor, Fort Screven, Ga.
95 Telescope Eyeglasses. K. Scott, London, England.

New York Medical Journal

May 20

96 *Case of Aneurysm of the Arch of the Aorta. J. Tyson, Philadelphia.
97 Nervous Affections in Relation to the Adjustments of the Eyes. G. T. Stevens, New York.
98 *Certain Lesions of the Lymph-Nodes. D. Symmers, New York.
99 The Manual Treatment of Certain Forms of Ulceration of the Skin. E. F. Cyriax, London.
100 *Pick's Syndrome, with Report of Case. E. E. Cornwall, Brooklyn.
101 Training for Public Health Work. A. E. Shipley, Brooklyn.
102 Causes of Constipation. S. Floersheim, New York.
103 Removal of the Third Digital Phalanx with Formation of a New Joint. E. Beck, New York.

96. **Aneurysm of Arch of Aorta.**—In Tyson's case the aneurysm was treated by wiring on two different occasions. The first time ten yards of silver wire were introduced into the sac. The most striking change which succeeded the wiring was the disappearance of the aneurysmal murmur, and the pain abated. There was no reduction in the size of the tumor. The systolic murmur which disappeared after the wiring remained absent. About two months afterward the aneurysm was again wired. Eighteen feet of No. 2 silver wire were introduced and 10 feet of No. 1 wire. The pain was again relieved by the wiring and the patient was able to sleep. The pulsation appeared also to be somewhat less strong. Notwithstanding the treatment, the aneurysm continued to grow rapidly. The man died about five weeks later. At the autopsy one piece of wire was seen to extend down the aorta, through the aortic valvular orifice into the left ventricle. It was a double loop, both ends being mixed up in a mass of wire. The lower end came to within 1 inch of the apex and the wire was quite firmly attached to one of the pectinate muscles.

98. **Certain Lesions of the Lymph-Nodes.**—Symmers summarizes his paper as follows:

1. Primary disseminated epithelioid tuberculosis of the lymph-nodes, while rare, is by no means unknown. Its occurrence as an epiphenomenon in status lymphaticus, however, appears not to have been recorded, so that the case described in this communication would seem to occupy an unique position.
2. The histologic changes in Hodgkin's disease resolve themselves into three stages, the *first of which is characterized by focal hyperplasia* of lymphoid cells and is succeeded, among other features, by the formation of multinucleated giant-cells and interstitial connective tissue overgrowths. Although the lesion may not progress beyond this granulomatous stage, cases occur in which the connective tissue *stroma* undergoes such extensive hyaline metamorphosis that the cellular details are obscured and the histologic individuality of the process is established only with difficulty. This transformation would appear to represent an attempt at healing.
3. A type of Hodgkin's disease exists, either primarily in the cervical region or in the thorax, in which the growth may invade surrounding structures and initiate secondary nodules in distant parts. In either issue the process admits of at least two legitimate interpretations: First, that invasion of surrounding viscera may be referred to sarcomatous transformation of an originally granulomatous lesion, or that it is an expression of compulsory growth and thus locally malignant rather than malignant in the sense that the infiltrating cells possess autonomous properties. Second, that the occurrence of secondary nodules may signify neoplastic conversion of the original growth and the transmission of autonomous qualities to cellular emboli deposited in distant parts, or that the transplanted provocative agent finds a suitable field of activity in the form of lymphomatous foci preexisting in the organ secondarily involved, or that it actually brings such foci into being, the process throughout remaining within the bounds of an inflammatory lesion. But when such highly presumptive evidence of malignancy as destructive infiltration of neighboring tissues and the formation of secondary nodules in distant parts is combined with changes in the morphology of the growth indicated by the development of vast numbers of large round cells and of myeloid giant cells, neoplastic conversion would appear to be established beyond doubt.

100. **Pick's Syndrome.**—The signs and symptoms which essentially constitute Pick's syndrome are: Enlargement of the liver with obstinately recurring ascites, but without jaundice and without signs of cardiac abnormity, in a patient who gives a previous history of pericarditis. Pick believes that the latent pericarditis disturbs the circulation, thereby producing hepatic engorgement and also connective tissue hyperplasia which interferes with the ramifications of the portal vein and thus brings about the ascites. He calls this pathologic complex pericarditic pseudocirrhosis of the liver. Cornwall cites such a case occurring in a boy, aged 19, after an attack of typhoid.

Albany Medical Annals

May

104 The Formation of Gall-Stones. H. W. Carey, Troy, N. Y.
105 Symptomatology and Differential Diagnosis of Gall-Stone Disease. H. C. Gordinier, Troy, N. Y.
106 Surgical Treatment of Gall-Stones. J. B. Harvie, Troy, N. Y.

Medical Fortnightly, St. Louis

May 10

107 Is Anything the Matter with the Doctors? W. J. Robinson, New York.
108 In the Twilight. C. E. Warren, North Easton, Mass.
109 Surgical Eponyms. M. Hagen, Chicago.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Lancet, London

May 6

1 Sensibility of Alimentary Canal in Health and Disease. A. F. Hertz.
2 *Symptomatic Vagaries of Partial Pyloric Obstruction. A. E. Maylard.
3 Indications of Inborn Proclivity to Gout. Sir D. Duckworth.
4 Suprapubic Transverse Fascial Incision in Gynecology. T. Wilson.
5 Aneurysm of the Innominate Artery; Proximal Ligature; Recovery. P. Sargent.
6 *Reversible Pulmonary Crepitation in Cardiac Failure. A. Morison.
7 Infant Mortality. W. E. Heilborn.

2. Symptomatic Vagaries of Partial Pyloric Obstruction.—The points of most significance in partial pyloric obstruction, according to Mayland, are intermittent attacks of dyspepsia, coupled at such times with the physical signs of gastric peristalsis or gastrectasis in often otherwise healthy patients.

6. Reversible Pulmonary Crepitation in Cardiac Failure.—Morison uses the adjective "reversible" rather than hypostatic, static or postural, to emphasize the fact that the well-marked crepitation denoting pulmonary congestion in the most dependent part is abolished, usually altogether and always, almost, by a single rotation of the patient on his own axis in bed, and in the short space of time which that movement occupies, a fact no doubt explicable by the nature and degree of the congestion in question. It is always, so far as his experience goes, denotative of a grave degree of cardiac failure when reversible from one lung to the other, but may nevertheless disappear and leave the patient in a position to resume his normal activity. While exhibiting the sign, however, he is compulsorily bedridden. It is not the state of the arteries, but of the heart which accounts for it. The sign denotes enfeebled ventricular action. It may be associated with an apical bruit of mitral incompetency, which disappears on convalescence; or no such bruit may be present. As it so happens, Morison has noted it more frequently in the absence than in the presence of organic valvular disease. The cardiac rhythm may be quite regular—has been so—in the cases in which he has observed it, and its rate only moderately, or, at times, considerably, increased.

British Medical Journal, London

May 6

8 *Hemorrhoids. E. S. Bishop.
9 Operative Treatment of Rectal Carcinoma. J. W. Smith.
10 Practical Points in Operating on Kidneys and Ureters. E. Deanesly.
11 *Appendicular Dyspepsia and Treatment of Diffuse Peritonitis R. C. B. Maunsell.
12 Deaths Following Gastro-Jejunostomy Not Due to Anastomosis. C. H. Whiteford.
13 Pathology and Treatment of Fistulæ. H. Drummond.
14 Similarity Between Acute Abdominal and Acute Pulmonary Conditions. G. G. Wray.
15 Mechanism of Transmission of Trypanosoma Lewisi from Rat to Rat by Rat Flea. C. Strickland.
16 Drainage Tube for Suprapubic Cystotomy, Liver Abscess and Abdominal Cysts. L. McGavin.

8. **Hemorrhoids.**—In Bishop's opinion the radical method of obliterating the perineal portion of the internal hemorrhoidal plexus (Whitehead's operation) is the one method which can be relied on to prevent any return of the condition. In order to carry this out effectually, he says that the whole perineal portion of this plexus up to the pectinate line should be removed, and the submucosa beyond brought down and firmly fixed to the skin. Failure to do this is at the root of organic stricture of the anus following an operation. In many, at least, of the cases or organic stricture following operation, dissecting out the resulting scar tissue, freeing of the external sphincter, and bringing down of the submucosal layer to the skin will result in a cure.

11. **Appendicular Dyspepsia.**—For several years it has been Maunsell's practice to open the abdomen by the ordinary oblique incision, remove the gangrenous or perforated appendix, and pass large "cigarette" drains from the wound to the bottom of the pelvis and to one or both kidney pouches, according to the diffusion of the purulent exudate. Silkworm-gut stitches are then placed in position, but not all tied, and the patient is nursed in the "Fowler" position, whilst plenty of saline solution is administered by the rectum. He does not find it necessary, even in the most diffused cases, to make counter openings in the loin or elsewhere. The drains are removed in from thirty-six to forty-eight hours and more of the sutures are tied, but the wound is not completely closed.

Clinical Journal, London

April 26

17 Gangrene Cholecystitis. H. J. Waring.
18 A Case of Carcinoma of the Rectum. E. M. Corner.
19 Clinical History and Treatment of the Less Obvious Types of Gummata. H. Curtis.

May 3

20 Principles of the Treatment of Colitis. W. H. White, R. Hutchison and P. L. Mummery.
21 Operations for Pott's and Dupuytren's Fractures. R. P. Rowlands.

Quarterly Journal of Medicine, London

April

22 *Infection of the Urinary Tract in Children by Coliform Organisms. W. M. Jeffreys.
23 *The Third Sound and "B" Wave in Slow Heart Action; Fallacies in the Interpretation of Records. J. D. Windle.
24 Paroxysmal Tachycardia of Brief Duration. E. E. Laslett
25 Modern English Cardiovascular Teaching. T. Lewis.
26 Alterations of the Hydrochloric Acid in the Gastric Juice, Due to Carcinoma of the Stomach. G. Graham.
27 *Influence of Salicylates on the Cardiac Lesions of Chorea. E. A. Cockayne
28 The Viscosity of the Blood. C. Allbutt.
29 Influence of Bacterial Emulsions on Phagocytosis. F. Golla.
30 Tuberculin in the Diagnosis and Treatment of Tuberculosis. E. C. Hort
31 *On Oxycephaly. H. M. Fletcher.
32 Treatment of Gastric Ulcer. E. I. Spriggs.

22. **Infection of the Urinary Tract in Children.**—Among 121 cases collected and studied by Jeffreys, sixty-seven were due to coliform organisms, thirty-seven to staphylococcus, ten to streptococcus, three to pneumococcus and four to other organisms. Of fourteen cases occurring during 1910, five patients died of the disease and one of meningococcal meningitis, in which the coli infection was a complication. There were sixteen cases in 1909, twelve cases in 1908 and nine cases in 1907; the remaining nine cases were scattered over the previous six years, and one of the patients died of the disease in 1905. Only ten dated the trouble from some previous illness, generally an acute specific fever. In thirty-four cases there was definite evidence of bowel trouble of one kind or another, in ten cases the bowels were noted as regular, and in sixteen there was no evidence pointing to bowel trouble.

With regard to the chief symptoms complained of, in thirty-seven cases they pointed to bladder trouble, usually painful micturition; three cases were brought up for diarrhea and vomiting, nine for abdominal pain, five with meningeal symptoms, four for debility and in two there were no symptoms. Four cases were discovered in children suffering from some other illness. Twenty-one began with symptoms pointing to bladder trouble and nine with symptoms suggesting pyelitis. In thirty cases there was no evidence to suggest the mode of onset. There was evidence pointing to pyelitis in thirty cases; in twelve the right kidney only was affected, in three the left only. The renal trouble began in or was confined to the right kidney in seventeen cases, the left in five; in one of the latter the right kidney was more markedly affected than the left. In eight cases there was no evidence to show which kidney was first affected. Examination of the urine shows that pus was present in nearly every instance, fifty-six out of sixty. Albumin was present in forty-five and blood in fifteen. The urine was acid in thirty-nine cases, alkaline in seven, neutral in one and in the remaining thirteen cases no note was made of the reaction. Casts were noted as being present four times.

Only twenty-one patients were discharged as being cured, that is to say, with no symptoms and no pus in the urine. Nine died; of these six died of the urinary trouble and three of some other disease, of which the urinary infection was a complication. Six were discharged *in statu quo ante* and twenty-three as "improved;" this usually meant that symptoms had abated but that pus was still present in the urine. Altogether fourteen patients were untreated, except by rest in bed and nursing; of these, one was cured, five went out unchanged, two were "improved," and six died, three of the latter from some other complaint. Forty-six patients were treated with drugs, or local applications to the bladder, and twenty of them were cured, four with washing out the bladder, one with alkalis by the mouth, five with antiseptics by the mouth and one with vaccines. The remainder had various combinations of the above methods. The usual treatment was on three lines: 1. Alkalis. 2. Urinary antiseptics. 3. Local treatment to the bladder. These were usually combined. Jeffreys thinks it most important to treat the bowel condition by washing out the large intestine and keeping it acting by means of aperients, but being careful not to produce further irritation of the large intestine, as is very likely with aperients. Judging by three cases cured by appendicectomy, it seems well worth while resorting to this measure in stubborn cases.

23. **Third Sound and B Wave in Slow Heart Action.**—A third sound with an associated B wave was present in 2 out of 193 observations made by Windle on normal individuals. The pulse-rate was abnormally slow and sinus irregularity present in both cases. In thirteen instances of the number of persons examined, a decided B wave was present in the venous tracing, in none of which a third sound was heard. Marked sinus irregularity was present in nine of the records. The pulse-rate in these cases varied from 50 to 60 per minute. When the pulse-rate was quickened in cases in which the B wave was persistently present under normal conditions, it did not show in the tracing when the pulse rate exceeded 80 per minute. When associated with sinus arrhythmia it was absent from the venous curve when the arrhythmic beats approached this rate. Windle found that the B wave may first appear in the venous tracing coincidently with regular slowing of the heart to a rate of from 50 to 70 per minute under digitalis. This may be brought about in the normal heart. In no case observed was there a third sound present. In slowing resulting from partial heart-block due to squill, an extra wave succeeding, blocked auricular waves is shown to occur. Coincidentally with the establishment of heart-block in this case, a clearly marked third sound was present. Venous curves showing the B wave may present a close resemblance at times to those resulting from extra-systoles or cases of heart-block. With a certain rate of pulse the B and A waves may fall together and give an appearance to the curve closely simulating an increased A-C interval.

27. **Influence of Salicylates on Cardiac Lesions of Chorea.**—The records of 780 hospital patients with chorea, treated during the last eight years, were carefully examined by Cockayne in order to discover whether salicylates really have the power of preventing the onset of carditis, or, if already present, of checking its further progress. Of the 780 patients, 355 were given salicylates and 425 received other treatment: 156 received doses below 60 grs. a day, 95 between 60 and 100 grs., 60 between 100 and 200 grs., 19 between 200 and 300, and 8 received doses of more than 300 grs. a day; the remaining patients were treated with acetosalicylic acid. If the drug has no effect the numbers showing cardiac change should be in the proportion of thirty-nine untreated to thirty-two treated with salicylates, and the actual numbers obtained are so near these that the disparity can have no significance. It might be thought that the larger doses would have had more effect in preventing the progress of the cardiac trouble, but the statistics do not suggest that the size of the dose has any such effect. Cockayne assumes that the organisms of rheumatism were probably present in the myocardium, endocardium or pericardium in these cases, and the salicylates (in the doses usually given) appear to have had no action in preventing their entrance into the heart, nor in stopping their further activity when once established there. This is confirmed by their inability to check the continuance of that low intermittent fever, with its daily or almost daily rise, usually to some point between 99 and 100 F., so characteristic of rheumatic infection in childhood. The fact that they do not prevent the formation of subcutaneous nodules, and that they have no action on choreic movements, which is probably due to toxins elaborated by organisms lying near the blood-vessels of the cerebrum, and poisoning the nerve-cells in their vicinity, would lead one to expect, by analogy, that they would have no action in the similar conditions found in the heart, and Cockayne's results show that this is the case.

31. **Oxycephaly.**—The cranial deformity generally known as oxycephaly is also described under various appellations, such as acrocephaly, known as *Thurmschädel*, *Spitzkopf*, tower or steeple-head, *turritum caput*, *tête à la Thersite* (Hamy). The cardinal signs are the characteristically shaped head, exophthalmos and impairment of vision, sometimes amounting to total blindness, associated with changes in the fundi oculorum. The aspect of the patient is very striking, the great height of the forehead sloping gradually upward to the vertex with feebly marked superciliary ridges. The vertex of the skull appears pointed instead of flattened or rounded, and a ridge, or bony prominence, is sometimes felt in the region of the bregma. The hairy scalp may be raised above the normal level and present the appearance of being perched on the top of a cone. Viewed laterally, the ears appear placed on a lower level than normal. The temporal ridges and depressions are feebly marked. Exophthalmos is present in all the well-marked cases. It is sometimes extreme, and dislocation of the eyeballs in front of the eyelids occasionally occurs. Failure of closure of the eyes, especially during sleep, may lead to lachrymation and conjunctivitis as in Graves' disease. Not infrequently the protrusion of the eyeballs is unequal on the two sides. Divergent squint is common and gives a peculiar appearance to the bulging eyes; occasionally the squint is convergent. Nystagmus is present in the majority of cases.

The complexion tends to be muddy, sallow and dark, especially in the older patients. The hair was dark in all the cases Fletcher has seen. They are usually mouth-breathers; the open, gaping mouth adds to the grotesque appearance and gives it a stupid vacant expression. In many cases the palate is shortened and extremely highly arched. The teeth are liable to early caries, the incisors are prominent. The last upper molars may remain unerupted, owing to the shortening of the superior maxilla. Intelligence is unimpaired in quite a large proportion of cases, and may be above the average. It is probable that in cases with a mental development below the average this may be due to the ocular defect, which develops in early life and produces a backwardness from "deprivation," to use Ireland's term. One of Fletcher's patients showed a remarkable degree of intelligence; finding that he was unable to read letters, he speedily taught himself to read the blind alphabet.

Medical Press and Circular, London

April 26

33 *Tachycardia in Children. E. Cautley.
34 Eclampsia: Puerperal Septicemia. H. Jellett.
35 A Case of Natural Delivery Following Cesarean Section. B. A. H. Solomons.
36 Pyloric Stenosis in Infancy. N. P. Marsh and K. W. Monsarrat.

May 3

37 Relation Between the Teeth and Certain Diseases of the Skin and Mucous Membrane. W. K. Sibley.
38 Morbid Mental Growths. G. H. Savage.
39 Chlorid of Ethyl as General Anesthetic. A. Malherbe.
40 Mental and Sick Nursing—a Retrospect and a Prospect. R. Jones.

33. **Tachycardia in Children.**—Cautley emphatically states that the proper treatment of tachycardia depends on its causation. If there is true dilatation, rest is essential until the heart has reverted to its normal or almost normal size. This must be followed by gradual exercise; at first passive exercises, and then resisted movements while in bed, slowly increased according to the results obtained. Subsequently the patient is allowed to sit up, to get up, to walk about the room, to walk downstairs and on the level, to walk upstairs and up a gradual slope, and then increasing distances up hill at a gradually increasing pace. The slightest shortness of breath is a sign of strain. In no instance should a school child be allowed to join in violent games until compensation has been perfectly established for at least six months. Games, such as croquet, golf, archery, badminton and lawn tennis can be taken up by degrees. Bicycling can be begun at a slow pace on a level road, six to eight miles an hour, and ultimately limited to ten to twelve miles an hour. Short bursts at a high speed and long distances must be forbidden. For the neurotic heart rely on general hygiene, residence in a non-stimulating climate, hydro-therapeutics; and a non-stimulating diet, devoid of alcohol, meat extracts, tea and coffee, and containing only a moderate amount of meat. Attend to the digestion, regularity of the bowels, sufficient sleep, and a simple mode of life. The most suitable drugs, in Cautley's opinion, are the valerianates, especially the valerianate of zinc, bromids and belladonna. During an attack of true tachycardia an attempt may be made to cut it short by applying to the præcordium a cold compress, an ice-bag, a spray of ethyl chlorid, or a mustard leaf, and giving strong

black coffee or sal volatile by mouth. In the intervening periods the treatment must be carried out on the lines appropriate for the treatment of the neurotic heart.

Annales de Gynécologie et d'Obstétrique, Paris

April, XXXVIII, No. 4, pp. 193-256

41 The Ovaries of New-Born Infants. M. Delestre.
42 Hysterectomy Without Opening the Uterus, for Hemorrhage from Placenta Praevia; Mother and Child Doing Well. Reymond and H. Cazalis.
43 *Treatment of Hemorrhage from Abnormally Situated Placenta. Champetier de Ribes and A. Couvelaire.

43. **Hemorrhage from Abnormally Situated Placenta.**—De Ribes analyzes his sixty-eight cases of this kind between 1890 and 1907. The mortality was 10.29 per cent., but two of the seven patients who died were moribund when brought in, and another was in advanced septicemia. A number of the children were prematurely born and died soon afterward, but twenty-five of the thirty-six children born alive left the maternity in good condition. In eight of the total sixty-four cases delivery proceeded normally and in seven nothing was required but podalic version. In eleven cases the *hemorrhage* was controlled by merely rupturing the fetal membranes, six of the children being born alive. In thirty-eight cases this was supplemented by introduction of the inflatable bag, twelve of the twenty children surviving.

Couvelaire reviews the experiences in 162 cases at the Baudelocque clinic during the last twenty years. The total mortality was 6.7 per cent., and excluding the moribund cases, only 1.28 per cent. The nearer to term the greater the viability of the children, only nine succumbing of the nineteen infants weighing over 3 kilograms at birth, while only two survived of the seventeen less than 2 kilograms in weight. Treatment was by rupturing the membranes, supplemented or not with the inflatable bag. In cases of neglected hemorrhage, in which the women are liable to die of septicemia if they survive the shock of their hemorrhages, he realizes the advantages of the Porro operation as removing at once the source of the hemorrhage and the organ which is liable to be the portal of entry for septicemia. He recently performed this operation with eminent success in thirteen minutes, with 10 gm. of chloroform, the hemorrhage being behind the placenta and very profuse.

Annales de l'Institut Pasteur, Paris

March, XXV, No. 3, pp. 193-286

44 *Experimental Typhoid Fever. E. Metchnikoff and A. Besredka.
45 Protection of Red Corpuscles Against Hemolysis by Dilute Solution of Formol. (Etude de la stabilisation des globules rouges de mammifères—du mouton en particulier—par les solutions tres diluées de formol.) P. A. Delille and L. Launoy.
46 Mechanism of Deviation of Complement Test: *the Antihemolysins in the Serum.* (Mécanisme de la réaction de Bordet-Gengou. II.) Crendiropoulo.

44. **Experimental Typhoid Fever.**—The research reported was done on fifteen anthropoid apes, fifty-one monkeys and a number of the ordinary laboratory animals. The fifteen chimpanzees alone were *susceptible to typhoid* infection by way of the mouth, while none of the lower monkeys, guinea-pigs or rabbits developed typhoid by this route, although in two monkeys of the macacus type typhoid bacilli could be cultivated from the spleen and lymph-glands but there were no characteristic lesions in the intestines. The picture of experimental typhoid differs entirely from that of experimental peritonitis induced by injection of typhoid bacilli in rodents. Vaccination with killed bacilli, which protects guinea-pigs against peritoneal infection, proved powerless to prevent experimental typhoid in the apes. This shows, Metchnikoff says, that we make a mistake when we *attempt to* apply to man the results of experimental research on guinea-pigs and rabbits.

Annales des Maladies des Org. Génito-urinaires, Paris

April 1, XXIX, No. 7, pp. 577-672

47 *Surgical Means to Estimate Kidney Sufficiency. (Moyens chir. de se renseigner sur l'état des reins quand cathétérisme urétéral et séparation échouent.) V. Rochet.
48 General Principles in Treatment of Gonococcus Urethritis. B. Motz.
49 Experimental Research on the Internal Secretion of the Prostate. N. Serrallach and M. Parés.

April 15, No. 8, pp. 673-768

50 Complete Prolapse of Bladder in 15-Months Infant. (Inversion vésicale.) Dervaux.
51 Rare Deformity of the Kidney. (Anomalie du rein.) M. Gerard
52 *Cystoscopy and Catheterization of Double Ureter. O. Pasteau.
53 *Renal Tuberculosis and Tuberculous Bacteriuria. G. Bolognesi.

47. **Surgical Means to Determine Kidney Sufficiency.**—Rochet refers to the cases in which catheterization of the ureters and intravesical segregation of the urine are impossible for any reason. The disadvantages of the various technics in vogue are obviated by a method which he has found very useful and describes as follows: The diseased kidney is not incised, but the ureter below is exposed and a small lengthwise buttonhole is made in it 6 or 7 cm. below the kidney. A short catheter is then pushed up through this buttonhole into the pelvis of the kidney. This collects all the urine from this kidney, and a large bougie is pushed down into the lower end of the ureter to plug it so no urine can pass out through it. The previously cleansed bladder collects the urine from the other kidney and the functioning of both is thus plainly beheld. If conditions require it, nephrectomy can follow at once or after an interval, as was done in one of Rochet's two cases. It is best to suture the buttonhole, as it did not heal up in the one case in which this was neglected.

52. **Catheterization of Double Ureter.**—Pasteau adds another to the twelve cases on record of double ureters on one or both sides, and discusses the cystoscopic findings with this anomaly, with or without two orifices in the bladder for each ureter. In his case there were three ureter mouths; the ureter catheter could not be passed through one, but it passed readily through the two others.

53. **Tuberculosis of the Kidneys and Tuberculous Bacteriuria.**—Bolognesi reports a case of the latter. The patient was a ii-para, aged 29, with symptoms suggesting tuberculosis in a wandering kidney. The kidney was removed, but notwithstanding the tuberculous bacteriuria only slight lesions were found in the kidney and they were not tuberculous. The case confirms anew the fact that tubercle bacilli can filter through the almost intact kidney parenchyma, with merely some minute and non-specific lesion. The tuberculin reaction was positive, but there is no evident tuberculosis in any organs. The patient is still in good health.

Lyon Chirurgical, Lyons

April, V, No. 4, pp. 301-420

54 *Kidney Stones. (Gravité opératoire des interventions pour calculs du rein.) M. Rafin.
55 Mechanism of Hernial Strangulation. (Mécanisme de l'étranglement herniaire.) J. Petrivalsky.

54. **Kidney Stones.**—Rafin reviews the statistics from eight European clinics in regard to operative treatment of kidney stones. In 287 aseptic cases the total mortality was 4.5 per cent.; this includes 34 pyelotomies without a fatality, and 193 nephrectomies with a mortality of 4.6 *per cent.* Operative treatment is thus shown to be comparatively harmless in the cases with little or no infection. The outlook is graver in the infected cases; the mortality in 158 nephrectomies for septic kidney stones was 18.4 *per cent.*; 14.2 per cent. in 7 pyelotomies and 5.3 per cent. in 205 nephrectomies. In 69 other cases the lithiasis was bilateral; *one* of Brougersma's two patients in this class had five operations before a complete cure was realized. Operative treatment in the aseptic cases gave excellent results, irrespective of the method followed.

Presse Médicale, Paris

April 22, XIX, No. 32, pp. 317-332

56 Cooperation of the General Practitioner and the Laboratory. (Le laboratoire et le practicien. Leurs rôles respectifs dans les analyses de produits pathologiques.) L. Hallion and A. Bauer.
57 Flexible Drains. (Le drainage par drains métalliques souples.) L. Lemaire.
58 Pterygium. (Sur la structure, le pronostic et une opération modifiée du pterygion.) A. Terson.
59 *Chronologic* Connection Between Ovulation and Menstruation. H. Busquet.

April 26, No. 33, pp. 333-340

60 Electric Heating of Deep Tissues. (La diathermie.) *D.* Labbé and M. Blanche.
61 Agar-Agar. A. Martinet.

Revue de Chirurgie, Paris

April, XXXI, No. 4, pp. 401-512

62 *Bilateral Tubal Pregnancies with Triplets. (Etude sur les grossesses tubaires bilatérales simultanées à propos d'un de grossesse tubaire à trois foetus.) P. Launay and Seguinot.
63 Tuberculosis of the Hip-Joint. (Coxotuberculose et son traitement.) P. Coudray.
64 Tumor in Salivary Gland. (Cylindrome de la glande sublinguale.) L. Heully and A. Boeckel.
65 *Hemorrhage in Gall-Bladder as Source of Biliary Colic. (Sur un point de pathogénie de la colique biliaire dans quelques formes de cholecystite non-calculeuse.) S. Solieri.

62. **Bilateral Tubal Pregnancy.**—Launay and Seguinot have found forty-one cases of bilateral tubal pregnancy on record, and they report a case in which there was a twin pregnancy in one tube and a simultaneous single pregnancy in the other. The size of the three three-months fetuses proved that the pregnancies were practically simultaneous. In only fifteen cases on record was the tubal pregnancy simultaneous on both sides.

65. **Biliary Colic in Cholecystitis Without Gall-Stones.**—Solieri refers to Sheldon's compilation of thirty-seven cases of apparent gall-stone colic without gall-stones. Henkel has also encountered seven cases of the kind, and Solieri has recently had a patient in his charge with typical, periodical biliary colic although there was not a trace of gall-stones in the gall-bladder or biliary passages. The patient was convalescing from typhoid and the operation revealed typhoid ulceration of the mucosa of the gall-bladder, with repeated hemorrhage from this ulceration. The hemorrhages had distended the inflamed walls of the gall-bladder and induced the typical attacks of pain as the walls contracted in the effort to expel the dense mass resulting from the accumulated blood. The first attack of colic lasted two days and seriously depressed the patient but the temperature returned practically to normal after evacuation of the gall-bladder. Four days later another attack of colic came on, and opening up the gall-bladder again revealed that it had filled up with blood anew although no immediate source for the hemorrhage could be detected. After this there were no further disturbances and the patient rapidly recovered. A tumblerful of blood was removed from the gall-bladder the second time it was opened. Pure typhoid cholecystitis of this type must be rare; typhoid infection of the gall-bladder generally sets up a more chronic inflammation or a rapidly fatal phlegmon (Lejars).

Archiv für Verdauungs-Krankheiten, Berlin

April, XVII, No. 2, pp. 119-240

66 *Estimation of Hydrochloric Acid in Stomach Content. (Ueber prozentualen und absoluten Salzsäuregehalt des Mageninhalts und seine Bedeutung für die Funktionsprüfung des Magens.) J. Schütz.
67 History of Intubation of the Duodenum. J. C. Hemmeter (Baltimore).
68 Physiologic Chemistry of the Human Pancreas. J. C. Hemmeter.
69 Importance of the Thread Impregnation Test for the Recognition of Ulcers of the Upper Digestive Tract. M. Einhorn, New York.
70 *Palpability of the Appendix. (Zur Palpierbarkeit des Wurmfortsatzes.) W. Orlowski.
71 Gastric and Duodenal Ulcers. Four Cases. G. A. Friedmann (New York).
72 *Pathology of Gastric and Intestinal Disease. (Kasuistische Beiträge zur Pathologie der Magen- und Darmkrankheiten.) E. Solms.
73 *The Therapeutic Use of Bile. (Die physiologische Funktion der Galle.) Z. Inouye and T. J. Sato.

66. **Percentage and Absolute Amount of Acid in Stomach Content.**—Schütz writes from von Strümpel's clinic in Vienna to sustain the view that the total amount of hydrochloric acid is the chief criterion in the study of gastric functioning. He describes the technic best adapted for research in this line, and gives the tabulated details of twenty-one cases of various stomach affections. His findings show that cases should be grouped as those with hyposecretion and hypomotility, in which case the absolute amount of hydrochloric acid is small. The other group contains the cases with large absolute amounts of hydrochloric acid with normal or increased stomach content an hour after the test meal. He suggests also for the hydrochloric acid unit, 1 c.c. $\frac{n}{10}$ HCl.

70. **Palpation of the Appendix.**—Orlowski was able to palpate the appendix in 250 of 510 men who had never had any symptoms on the part of the appendix. He was surprised to find that the appendix was tender in 58.4 per cent. of the 250 cases. In examining for the appendix he begins to palpate at the psoas iliacus, the patient lying on his back, and palpates along the cecum to the appendix from below upward and from without inward. If the abdominal wall is too rigid, he has the patient lie in a hot bath to relax the muscles. With this technic he found it easy to detect the appendix in over 50 per cent. The appendix can seldom be palpated its entire length. He reviews considerable work in this line in Slavic literature as well as Rudnitzki's work in the *Archiv.* The latter was not so successful in palpating the appendix, but he found it tender in 59.7 per cent. of the cases in which he was able to palpate it.

72. **Pathology of Gastro-Intestinal Tract.**—Solms reports from Boas' clinic in Berlin four unusual cases, three being remarkable for the rapid and pronounced increase in weight with progressive cancer in men of 32 and 39. In the first case a gastric carcinoma had evidently developed in an ulcer treated four years before. Not a trace of tenderness or tumefaction could be detected on examination, six months after the first symptoms. Treatment for the hyperacidity improved conditions but two months later a large tumor was palpable and the laparotomy showed an inoperable growth. This case confirms the malignancy of these rapidly developing carcinomas. The outlook for operative treatment is more favorable in cases in which the symptoms have been longer in developing. The patient increased over 18 pounds in weight in the first eighteen days of his stay in the clinic and he was discharged, but symptoms returned in a week. In the next case the patient gained nearly 8 pounds in a week, notwithstanding the presence of advanced carcinoma at the pylorus, hidden behind the liver. In the third case the lack of a palpable tumor, the gain of nearly 13 pounds in a week in connection with the age, 32, spoke against cancer. The only symptoms had been occasional vomiting, commencing in March; by October the patient felt weaker, with a sensation of distention of the stomach even when the food was restricted to fluids. There was no pain in the stomach nor blood in the vomit; the appetite persisted good, but toward the last there were occasional cramp-like sensations in the abdomen and considerable loss of weight. In December he entered the clinic and gained nearly 13 pounds in weight in a week but on discovery of occult blood an inoperable carcinoma was found at the junction of the duodenum and jejunum. In a fourth case the trouble was a syphilitic ulceration at the splenic flexure. In the fifth case there were evidences of gastrectasia and gastroptosis in a woman of 23, but there were no signs of stenosis of the pylorus. After gastro-enterostomy the patient was permanently cured, suggesting the possibility of some kinking as responsible for the persistent vomiting.

73. **Bile in Therapeutics.**—After discussion of the physiologic functioning of bile, its antiseptic and diastatic action and the way in which it promotes peristalsis and absorption of fat, Inouye and Sato give the metabolic findings in fifteen cases and report others, all confirming the advantages of bile as a rational organotherapy against the symptoms produced by defective secretion of bile in jaundice from various causes. It promotes absorption of fat, they say, and if it is given fasting, with considerable water, it does not disturb the digestion in the stomach. It also exerts a laxative action. They prefer to give the bile in the form of condensed ox-gall in sweetened peppermint water, in the dose of 0.5 or 1 gm. (7.5 to 15 grains) an hour before meals, three times a day.

Beiträge zur Klinik der Tuberkulose, Würzburg

XIX, No. 2, pp. 337-430. Last indexed April 8, p. 1075

74 *Wind Instruments and Emphysema of the Lungs. (Führt die funktionelle Beanspruchung der Lungen beim Spielen von Blasinstrumenten zu Emphysem?) E. Becker.
75 *A Century of Tuberculosis at a Health Resort. (Die Sterblichkeit der Bevölkerung Lippspringes an Tuberkulose von 1801-1909.) Werner.
76 *Tuberculosis in Infants. (Ueber Säuglingstuberkulose.) R. Pollak.

77 *[illegible] the Findings in the Lower Lobe. (Zur [illegible] iger Unterlappenbefunde.) A. Bauer.
78 *[illegible] in Relation to Tuberculosis. (Die [illegible] ungen des Nasen-Rachenraumes in ihren Beziehungen zur Tuberkulose.) G. Simon.

74. **Wind Instruments and Emphysema of the Lungs.**—Becker has been studying the vital capacity in twenty-two players of wind instruments, and a number of other persons. The findings show that there is a tendency to over-distention of the upper part of the lungs in players of wind instruments, but that diffuse chronic emphysema is generally the result of disturbances in breathing caused by chronic inflammatory narrowing of the bronchi.

75. **Tuberculosis at a Health Resort 1801-1909.**—Werner declares that never and nowhere in the world have such data been available as he has found at Lippspringe in Prussia. He also asserts that nowhere in the world has there been such a general and intensive dissemination of tubercle bacilli as during the 100 years and more at this place since it became famous as a health resort for consumptives. During the last seventy-six years, 170,000 visitors came for a course of the waters and fully 80 per cent. were consumptives. They were lodged mostly in private houses and there was no suggestion of measures to prevent contagion. At the same time the parish records for over a century give the cause of death of the native population. These data show that early in the last century nearly 10 per 1,000 of the population died of tuberculosis, but this proportion has been growing constantly less until in the last four years it amounted only to 3.5 per thousand. The population of Lippspringe is unusually stable, and the data presented speak against the assumption that pulmonary tuberculosis is highly infectious. If this were the case, the whole population of Lippspringe would have died off of tuberculosis. The consumptives' sojourn at Lippspringe is restricted to the six warmer months of the year, and hence it must require longer than six months for children and adults to acquire tuberculosis. As the population escaped infection, even with this close contact with the tuberculous, there seems to be little danger of infection of visitors by each other at such a health resort. Another point brought out by these data is that closed institutions are not superior to ordinary spa conditions as far as security against infection is concerned.

76. **Tuberculosis in Infants.**—Pollak surveys the experiences in this line at the Vienna policlinic, giving the details of a few typical cases of tuberculosis in infants. In three no clinical symptoms of tuberculosis could be discovered until over eight, fourteen and eighteen months after a positive tuberculin reaction had been obtained. The most frequent sign of tuberculosis in infants is involvement of the bronchial glands, manifested by the cough and wheezing during expiration. Cutaneous tuberculides are also a frequent early sign. Tuberculous meningitis often develops a few weeks after primary infection of the infant, but tuberculosis may exist throughout the first year of life without any clinical manifestations. The prognosis depends essentially on the severity of the infection: infants infected from a patient with advanced tuberculosis generally succumb, while the surviving infants had generally derived their infection from a mild source. It was found that the tuberculous infants grew up with the phthisical habitus. This habitus is thus the consequence of early infection with tubercle bacilli.

77. **Interpretation of the Findings in the Lower Lobe.**—Bauer gives the details of nine cases of a unilateral process in the lower pulmonary lobe. In two, tuberculosis had been incorrectly assumed; in seven others the alleged tuberculous process in the lower lobe still persists, but tubercle bacilli have been found in only one case. The findings show that normally the lower lobes are more movable and more active in their excursions than the upper lobes and apices which are so readily rendered immovable by cicatricial changes. The findings may vary in degree, but their constant presence at the same points is significant. He always examines early in the morning, before the first cough and expectoration, again during and after this, and again in the afternoon; that is, twice a day, systematically, at shorter or longer intervals.

78. **Adenoid Vegetations in Relation to Tuberculosis.**—Simon has examined eighty-eight excised adenoid growths, finding tubercle bacilli in them only in three cases, once from a robust and apparently healthy girl with negative tuberculin reaction. He did not find tubercle bacilli in the vegetations from six children with pronounced pulmonary tuberculosis and only once in those from six children with manifest tuberculosis of the bronchial glands, showing that the tonsils and vegetations must play only a subordinate part as portals of entry for the tubercle bacillus. He advises in treatment merely measures to act on the lymphatic diathesis, leaving the adenoid vegetations alone unless they interfere with respiration. Dieting, brine baths, etc., will act indirectly on the vegetations. But it is extremely important in every case of enlarged tonsils and vegetations to examine the thorax with care, as also, when there are signs of disease of the bronchial glands or bronchial catarrh, the nasopharynx should be investigated with special care.

Beiträge zur klinischen Chirurgie, Tübingen

March, LXXII, No. 2, pp. 265-580

79 *Idiopathic Talipes Cavus. (Hohlfuss.) E. Müller.
80 Indications with Abdominal Contusions. (Indikationsstellung bei traumatischen subkutanen Bauchverletzungen.) M. Hopp.
81 *Perforation of Gastric and Duodenal Ulcers. G. Petren.
82 Surgery of Vessels. (Zur Chirurgie der Gefässe.) J. Amberger.
83 Deep Goiter with Accessory Goiters. (Ueber Struma retrovisceralis mit Halskyphose und über laterale Nebenkröpfe.) A. Reich.
84 Anatomy and Surgery of the Biliary Ducts. (Gallenausführungsgänge.) H. Kunze.
85 *Treatment of P[illegible] ny by Parathyroid Grafts. (Behandlung [illegible] thyreopriva mit Ueberpflanzung von [illegible] M. Krabbel.
86 *Acute Carcinosi [illegible]

79. **Talipes Cavus.**—Müller reviews twenty cases of severe contracture of the plantar muscles of various origin. An inherited tendency was evident in three cases and in another family two sisters were affected. Subcutaneous resection of the plantar aponeurosis is generally sufficient, at least for children, followed by a plaster cast and the use of a screw apparatus. This suffices in the milder cases; in the more severe it is necessary to resect the soft parts with a wedge excision in the tarsus, including the four cartilage faces of the mediotarsal articulation, or a wedge from the tarsometatarsal articulation.

81. **Perforation of Gastric and Duodenal Ulcers.**—Petren gives summaries of 100 cases of acute peritonitis from perforation of an ulcer of the stomach or duodenum requiring operative treatment. The material is compiled from thirteen hospitals in southern Sweden. There was more than one perforated ulcer in 5 per cent. of the cases, and the ulceration was generally of comparatively long standing; in more than half the cases the patients had had symptoms of ulcer years before or recently or both, and in only ten had the ulceration run a latent course, and in these cases it was generally in the duodenum. In more than half of the cases, vomiting occurred in connection with the perforation. In fifty-nine cases the perforation was sutured and twenty-eight of the patients were saved, while only three recovered of the forty-one in which this was not done. In the fifty cases in which the operation followed the perforation within fourteen hours, twenty-four of the patients recovered, while only seven of the others were saved. The tabulated data show conclusively that an operation in the first twelve hours, with complete suture of the perforation, are very important conditions for a favorable outcome, especially when the patient is under 40. Whether the stomach was full or not, does not seem to influence much the outcome when the operation followed in less than twelve hours. When the pulse is 120 or over the prognosis is grave. He discusses the technic, his work filling 137 pages.

85. **Parathyroid Grafts for Tetany.**—Krabbel reports a case of tetany following strumectomy in 1901. The tetany developed the day after the operation. The patient was an otherwise healthy girl and the attacks of tetany recurred only during menstruation; the cramps were limited to the hands, but there were also headache, vertigo, tremor and pains in the

side and back. After seven years, four parathyroids from another goiter patient were implanted in a hole made for them in the tibia. Improvement gradually followed, completely relieving the patient of the annoying manifestations of her postoperative tetany. In a second case genuine tetany developed in a young man with chronic tuberculous cystitis and hypoplasia of the genitals. A parathyroid was implanted in a preperitoneal space and there has been no further manifestation of the tetany since, not even when a cystoscope is introduced. The hypoplasia of the testicles in this case suggests that several of the glands with an internal secretion may be abnormal, or at least rudimentary. The patient succumbed to tuberculosis of the kidney ten months after the operation.

86. **Acute Carcinosis.**—Horn has collected 182 cases, including five from his own experience, in which cancer developed and ran its course in about three months, with metastasis in 83 per cent. He gives the summaries of the material, calling attention to the predominance of these galloping cancers in the lung, kidneys and liver, organs in which primary carcinoma is comparatively rare. None of these galloping cancers was found in the uterus or skin, and the breast, stomach and rectum were only rarely involved. Over 51 per cent. of the patients were under 40, seventeen under 10, twelve between 10 and 20; twenty-seven between 20 and 30 and thirty-seven between 30 and 40. In the cases in which the breast was involved there had generally been preceding mastitis; both breasts were affected in 34 per cent. of the forty-one cases of mammary carcinoma. In twenty-six of the cases the carcinosis had been misinterpreted. The lung carcinomas made only slight local disturbances, the metastasis in the brain having dominated the clinical picture, so that the diagnosis was generally cerebral tumor. The acute cachexia will generally supply the clue if the possibility of acute carcinosis is borne in mind, especially with a history of preceding trauma, development during pregnancy or puerperium, involvement of a predisposed organ and comparative youth. Operative treatment has no chance for success in this acute malignant disease. In conclusion, he reports a case of primary sarcoma of the thyroid leading to acute miliary sarcomatosis with multiple metastasis in the gastro-intestinal tract.

Berliner klinische Wochenschrift

April 24, XLVIII, No. 17, pp. 741-784

87 *Kinks which Develop in Our Drainage System in Chronic Intestinal Stasis. (Schleifen welche sich in unserem Magendarmkanal bei chronischer Darmstase enwicklen.) W. A. Lane.
88 *Chronic Intestinal Stasis Treated by Short-Circuiting or Colectomy. Fifty Cases. (Chronische Darmstase, behandelt mittels Kurzer zirkulärer Umschneidung oder Kolektomie.) H. Chapple.
89 Linear Amputation. (Indication, Technik und Nachbehandlung der "lineären Amputation.") W. v. Oettingen.
90 *Removal of Large Angioma of the Brain. R. Cassirer and R. Mühsam.
91 *Pyelitis of Pregnancy. N. Markus.
92 The Roentgen Rays in Gynecology. M. Fraenkel.
93 Responsibility of the Surgeon from Legal Standpoint. (Der Operationsvertrag.) Katz.

87-88. Similar articles appeared recently in our British exchanges.

90. **Angioma of the Brain.**—Cassirer and Mühsam report a successful operative case of Jacksonian epilepsy involving the left side, in a young man. The attacks had gradually increased in number and severity during six years, with finally "touch paralysis" of the left hand. An operation revealed an angioma of the pia mater which had penetrated into the cortex. The dura flap was replaced and a week later the angioma was removed, ligating even the minutest veins. Left facial paralysis and paralysis of the arm and leg were noted at once after the operation, but this gradually subsided except for a little paralysis of the fingers, as part of the center for the hand was removed with the tumor. There have been no further epileptic attacks since, and the young man has resumed his work as a forester, for which his epilepsy had long completely incapacitated him. There are only a few such cases on record—three are cited from Krause's experience. In all, the circumscribed epilepsy was the main symptom, the course was *extremely* slow and gradual, and there was none of the general symptoms common with brain tumors, or merely traces of headache or choked disk, while in each case there was a history of some trauma, possibly slight and in childhood. Intervention has generally been restricted to ligation of the vessels and destruction of the tumor tissue, but extirpation has given excellent results in a number of cases.

91. **Treatment of Pyelitis of Pregnancy.**—Markus remarks that pyelitis in pregnant women is generally confined to the right kidney pelvis, and is due to compression of the right ureter by the gravid uterus, exaggerating the normal angular course of the right ureter into actual kinking. The gravid uterus has a tendency to deviate to the right, and by simply having the women lie on their left side all trouble from compression of the right ureter ceases at once. Rosinsky has found this the sovereign measure in treatment of the pyelitis of pregnancy, and Markus adds his testimony in regard to the remarkable benefit from it in two cases in his practice. The trouble came on in one with a chill, high fever, tenderness at McBurney's point and a painful area in the sacral and right kidney region, with albumin and pus in the urine, and both diplococci and colon bacilli. No benefit was derived from a course of local treatment for the assumed cystitis. The uterus, four months pregnant, was found to be deviated to the right, probably from adhesions left from a former pregnancy. The patient was instructed to lie on the left side and mineral waters and hexamethylenamin were given internally to flush out the kidney from within. These measures, previously ineffectual, promptly cured the patient when supplemented by reclining on the left side. The temperature was normal by the end of a week and the urine free from pus and bacteria by the ninth day. Ten days after complete recovery there was a slight recurrence of the pyelitis which yielded at once on resumption of treatment. This recurrence, he adds, sustains still further the assumption of compression of the ureter as the cause of the trouble as the patient got up. The second patient was eight months pregnant and the same treatment proved equally effectual.

Deutsches Archiv für klinische Medizin, Leipsic

CII, Nos. 3-4, pp. 217-450. Last indexed April 29, p. 1302

94 *Distribution of Goiter in Saxony. (Verbreitung des Kropfes im Königreich Sachsen mit bes. Berücksichtigung der geologischen Verhältnisse.) E. Hesse.
95 *Testing Kidney Functioning. (Zur Funktionsprüfung der Niere.) P. v. Monakow.
96 *Research on Functioning of Kidneys with Chronic Vascular Disease. Schlayer.
97 Ventilation of the Lungs with Emphysema. (Gasaustausch zwischen der Aussenluft und den Alveolen. III.) R. Siebeck.
98 Increased Metabolism with Chronic Leukemia. (Steigerung des Stoffwechsels bei chronischer Leukämie und ihre Ursachen.) E. Grafe.
99 *Spastic Constipation and Its Relation to Antiperistalsis. (Die spastische Obstipation und ihre Beziehungen zur Antiperistaltik.) G. Boehm.

94. **Goiter in Saxony.**—Hesse's map seems to indicate that mountainous regions, irrespective of the geologic formation, *are particularly prone to goiter. He is inclined to incriminate* some physical factor; possibly hill-climbing, in the origin of goiter, but believes that several causes probably cooperate. In the Marienberg epidemic of goiter it was found that the collars worn had been too tight, the young people's necks growing in circumference faster than the parents had realized.

95. **Tests of Kidney Functioning.**—Monakow reports from the Munich clinic in charge of von Müller extensive research on the *capacity of* the urine to eliminate salt and nitrogen, iodin and water. The elimination of each was tested daily for from three to eight weeks. On a constant diet he gave the patients on one day 20 gm. of urea, or gave 10 gm. of salt or had the patient drink 3 quarts of water, each on a separate day, supervising the elimination in the urine thereafter. The findings in nine cases of nephritis are tabulated with the necropsy findings in most, thirty-three tables giving an oversight over the metabolism. They demonstrate beyond question that there are kidney disturbances in which the elimination of salt proceeds normally, while the elimination of nitrogen is extremely defective. In other cases the salt may be eliminated defectively, while the output of nitrogen is normal. *It is* possible to *determine* the conditions in this respect *in each* individual case and thus permit proper treatment. Compari-

son of the clinical course with the anatomic findings seems to indicate that the glomeruli are involved in the elimination of nitrogen, while the convoluted tubules are engaged more in the elimination of salt and of water.

96. **Functioning of Diseased Kidneys.**—Schlayer devotes over thirteen pages to the tabulation of the details of forty-one cases of what he calls chronic vascular nephritis, including contracted kidney. With the chronic vascular disturbance, the elimination of water is defective, while that of salt is unmodified, elimination of milk sugar is retarded, while that of iodin proceeds as under normal conditions. The vessels of the kidneys are injured by prevailing conditions and may become hypersensitive, in which case there is polyuria, or the vessels may be so severely injured that they act sluggishly, in which case there is oliguria. Even ingestion of large amounts of salt and water is not followed by elimination of the salt or of the water, as the kidney vessels are not sufficient for the task. He thinks that this is the first time that attention has been called to this oliguria form of contracted kidney. The kidney vessels may seem to be normal on histologic examination, but this does not guarantee their functional integrity. With contracted kidney the injury of the vascular system of the kidneys is practically universal, in contrast to the anatomic findings. In both acute and chronic vascular nephritis the elimination of solid substances and hence the specific gravity are determined by the biologic behavior of the kidney vessels.

99. **Constipation and Antiperistalsis.**—Boehm reports clinical experiences and reviews the results of experimental research, all suggesting that excessive antiperistalsis may sometimes be responsible for intractable constipation. Atropin never failed to control it in his cases.

Deutsche medizinische Wochenschrift, Berlin

April 27, XXXVII, No. 17, pp. 769-816

100 *Radioactivity of Mineral Waters. H. Kionka.
101 *Prognosis and Course of Pneumococcus Meningitis. F. Rolly.
102 *Diagnosis of Gout from Purin Metabolism. A. Magnus-Levy.
103 Technic to Avoid Febrile Reaction After Intravenous Injection of Salvarsan. W. Wechselmann.
104 *Length of Sojourn of Food in the Body. (Dauer des Verweilens der Nahrungsmittel im Körper.) A. Hiller.
105 *Treatment of Sluggish Intestinal Functioning by Hot Enemas. (Darmträgkeit und ihre Behandlung mit warmen Darmeingiessungen.) A. Hiller.
106 Duodenal Ulcer. (Duodenalgeschwür.) Seyffarth. Commenced in No. 15.
107 *The Wassermann Reaction in Lead Poisoning. (Wassermannsche Reaktionen bei Bleivergifteten.) A. Dreyer.
108 *Kidney Colic and Herpes Zoster. E. Rosenberg.
109 Sterilization of the Hands. (Altes und Neues zur Händedesinfektion.) P. Sick.
110 *[illegible] Experimentelle Untersuchnngen G. Bernhardt.
111 * [illegible]

100. **Radioactivity of Mineral Waters.**—Kionka surveys our present knowledge in regard to the properties of radium and radioactivity. Radium and its chemical compounds lose half their active power in 1,760 years, and this period is accepted as the "half value constant unit;" this unit for the emanations is only 3.8 days, and for induced radioactivity only half an hour. The emanations send out only alpha rays and have a general action, while radium itself has a local action, sending out both alpha and beta rays and also the gamma rays which are identical with the Roentgen rays. Sifting the literature shows, he says, that absolutely certain success cannot be guaranteed from radium treatment in any affection or disease, but that good results have been achieved in chronic rheumatism and in gout. It relieves the pain in many cases and, exceptionally, in deforming arthritis; and a little more often in neuralgia, especially sciatica. The pains in tabes have also occasionally been relieved, but the other symptoms were unmodified. In local treatment of tumors and nevi it has also done good service. Gudzent has definitely proved that radioactive substances are able to transform the sparingly soluble sodium monourate into a more easily soluble body, and thus permit the dissolving out of the deposits of urates in the gouty. The action depends on the length of exposure to the emanations rather than on the dosage. Fofanow witnessed the subsidence of artificially induced tophi in animals under the influence of radium emanations.

101. **Pneumococcus Meningitis.**—Rolly states that thirty patients with pneumococcus meningitis have been treated at the medical clinic at Leipsic during the last five years, and four of the patients recovered. Frequently repeated lumbar puncture not only permitted differentiation, but had a direct curative effect. The fluid contained increased numbers of polynuclears in the early stages, while the mononuclears predominated toward the close of the disease process. In the first three of the four cases with recovery, the meningitis seemed to develop at the same time as the pneumonia, but in the fourth case the meningitis seemed to have been the first localization. The meningitis developed with sepsis and endocarditis in 20 per cent. of the total thirty cases; with otitis media in 10 per cent.; with disease of the accessory nasal sinuses in 30 per cent.; after trauma in 3 per cent., and with unknown primary localization in 10 per cent. With pneumococcus peritonitis the onset is generally stormy, but it may be masked by the predominant disease. The delirium was aggressive, the patients screaming and trying to get out of bed until they fell into coma; death followed in from two to twenty-five days. Only six of the total thirty patients lived for more than ten days, except the four who recovered. Repeated and copious withdrawal of cerebrospinal fluid by lumbar puncture evidently gave vent to swarms of pneumococci, and the influx of fresh fluid brought bactericidal reenforcements to the spot. Large doses of hexamethylenamin seem indicated also, as the drug passes into the cerebrospinal fluid, according to experiences recently reported. In one of the four cases with a favorable outcome, Rolly applied lumbar puncture sixteen times, withdrawing a total of 600 c.c. of fluid. The patient was a girl nearly 3 years old. The other convalescing patients were 6, 18 and 20 years old. The prognosis of pneumococcus meningitis seems to be graver than in the epidemic form.

102. **Diagnosis of Gout from Purin Metabolism.**—Magnus-Levy reports the case of a man of 43 with disturbances ascribed to gout until the metabolic findings were found constantly normal. The apparently gouty disturbance in both feet was then ascribed to flat-foot, but no benefit was derived from treatment on this assumption. Finally a tophus developed in the ear, which confirmed the diagnosis of gout. Levy is convinced that there were actual flat-foot disturbances, and that they provided the point of lesser resistance so that the gout localized at this point rather than at its usual sites. His has recently published a similar case in which the elimination of uric acid proceeded as in normal conditions, and yet the patient presented typical gout. These cases suggest that the explanations offered for the mechanism of gout do not fit all the cases.

104. **Length of Sojourn of Food in the Body.**—Hiller used uncooked ripe peas for the test, finding that they passed readily and harmlessly through the alimentary canal and were easily recognized in the stool. Experiments on a number of healthy persons, on ten with gastric fever and fifteen with typhoid, besides a number of other patients, showed a number of interesting points in regard to intestinal functioning. The food eaten at one time does not pass through the intestines in one mass; the peristaltic contractions move along more rapidly the part of the intestinal content which is nearest the walls, leaving the center to follow more slowly. When the peristalsis is abnormally active on account of irritation of the bowel walls, or abnormally sluggish in cases of constipation, the bowel content is moved along to correspond. With normal conditions the swallowed peas showed that the food sojourned in the intestines from eighteen to forty-two hours, with habitual constipation from forty-two hours to five days. Catarrhal irritation of the intestine increased the peristalsis so that the sojourn was reduced to thirteen or fifteen hours, and, with dysentery, to six or nine hours. In typhoid there is evidently a paralysis of the bowel during the second, third and fourth week in the severer cases. In treatment of habitual constipation Hiller has been much pleased with the effects of a systematic enema of hot water every morning, injecting a quart of water at a temperature of about 95 to 104 F.

There is probably an antiperistaltic reflex which forces the water past the sigmoid flexure, as, beside the stool which follows at once, fluid stool is expelled about fifteen minutes later and again from half an hour to an hour afterward. The effect of this hot enema does not wear off like that of other measures to act on the bowels. He has one patient who has kept it up regularly with constant benefit for two years to date.

107. **Wassermann Reaction in Lead Poisoning.**—Dreyer obtained a positive Wassermann reaction in four of thirty-five patients with lead poisoning free from any signs or history of syphilis. *He also suggests that a positive reaction may be obtained in mercury poisoning in persons free from or cured of syphilis, the metal poisoning leading to erroneous conclusions.*

108. **Kidney Colic and Herpes Zoster.**—In Rosenberg's case the long dubious diagnosis of nephrolithiasis was cleared up by an eruption of herpes zoster and the discovery of a hypersensitive zone that fitted in with Head's theory. The intense colics in the right side of the abdomen in the extremely nervous woman of 26 were not accompanied by any signs of trouble in the kidney region, palpation, urine and Roentgen-ray findings all being negative. Not until after a year and a half was the diagnosis rendered certain by the herpes and hypersensitive zone. The case confirms in every respect that recently reported by Bittorf in which the right herpes zoster in the eleventh dorsal segment region accompanied colics in the right kidney region from intermittent hydronephrosis in a wandering and probably calculous kidney.

110. **Experimental Scarlet Fever.**—Bernhardt was able to induce apparently typical scarlet fever in monkeys by inoculation with scrapings from the tongue of scarlet fever patients. The inoculations were successful even when made in the mouth alone. The monkeys were of the smaller species and the inoculations gave positive results in fourteen of the nineteen experiments, only three being positively negative. He was able by passage through the monkeys to obtain the virus pure.

111. **Pectineal Hernia.**—Ulrichs reports a third case of this form of hernia encountered at the Urban Hospital in Berlin, bringing the total to fifteen on record of which he knows. In this latest case the hernial sac was extremely long so that it lay along behind the femoral vessels, below the fascia, close to Gimbernat's ligament. There was no external evidence of the hernia except a broad, shallow protrusion just below Poupart's ligament, filling the oval foramen.

Jahrbuch für Kinderheilkunde, Berlin

April, LXXIII, No. 4, pp. 391-544

112 Digestion of Farinaceous Foods in Infant Feeding. (Weitere Untersuchungen über Mehlabbau.) M. Klatz.
113 Amino-Acid Content of Urine in Children. (Aminosäurengehalt des Kinder- und Säuglingsharn.) R. Hadlich and P. Grosser.
114 *Action of Sugar and Salt on Infant Organism. (Wirkung von Zucker und Kochsalz auf den Säuglingsorganismus.) S. Cobliner.
115 Etiology of Congenital Inspiratory Stridor. W. P. Shukowsky.
116 Epidemic of Typhoid in a Boys' Orphan Asylum. (Zur Klinik des Abdominaltyphus im Kindesalter.) H. Vogt.

114. **Action of Sugar and Salt on Infant Organism.**—Cobliner used a 5.5 per cent. solution of grape sugar and infused up to 200 c.c. in twenty-three infants. He gave to twenty-five others 2 to 3 c.c. of sodium chlorid with their food, and in nineteen others made a subcutaneous injection of 200 c.c. of a 0.9 per cent. salt solution. The findings in regard to the following reactions with these and other tests reported are tabulated for comparison. Among the conclusions drawn from them is that the kidneys of young infants are more susceptible than those of adults. They do not eliminate salt supplied suddenly in large amounts; retention follows and sometimes edema occurs, even in perfectly healthy infants. A temperature reaction is also the rule.

Medizinische Klinik, Berlin

April 23, VII, No. 17, pp. 641-678

117 *Benign Stenosis of the Splenic Flexure. (Gutartige Stenose an der Flexura coli sinistra.) E. Allard.
118 *Present Status of Salvarsan. (Welche Stellung gebührt dem Salvarsan in der Syphilistherapie.) G. Stümpke.
119 Diagnosis and Treatment of Isolated Mitral Stenosis. H. Birrenbach.
120 *Case of Cerebral Neurasthenia Cured by Breathing Exercises. H. E. Knopf.
121 Technic of Catheterization of the Ureters. H. Lohnstein.
122 *The Wassermann Reaction as an Aid in the Detection of Criminal Responsibility. (Die Wassermannsche Probe als Hilfsmittel der forensisch-psychiatrischen Beurteilung; Schwachsinn; sexuelle Delikte.) S. Placzek.
123 Blood Findings in Scarlet Fever. (Zytologische Blutuntersuchungen bei Scharlach.) O. Roth.

April 30, No. 18, pp. 679-720

124 *Lactation. (Das Stillen, seine Technik und Indikationen.) S. Weiss. Commenced in No. 17.
125 Radium from Biologic Standpoint. H. Kionka.
126 *Symposium on Operative Treatment of Gastric Ulcer. (Magengeschwür.) M. Wilms and Others. Commenced in No. 16.
127 *Bronchoscopy. (Zur klinischen Bedeutung der Endoskopie der unteren Luftwege.) A. Ephraim.
128 *Salvarsan in Small-Pox. R. Lenzmann.
129 Reflex Epileptic Seizures in Appendicitis. Two Cases. F. Berndt.
130 *Substitute for Mountain Sunshine. (Kann man die "Höhensonne" künstlich ersetzen?) G. Breiger.
131 Has Silicic Acid Balneotherapeutic Action? (Hat die Kieselsäure balneotherapeutische Bedeutung.) H. Schulz.

117. **Stenosis of Splenic Flexure.**—Allard reports two cases of *non-malignant stenosis of the left flexure of the colon.* The patients were men of 25 and 51, with long chronic constipation. Attacks of colic, localized predominantly in the left hypochondrium in one case and more diffuse pain throughout the abdomen in the other, were explained by kinking of the splenic flexure with resulting growing together of the transverse and descending colon, evidently traceable to some pericolitis not perceived at the time. If internal measures do not prove successful after a reasonable trial, he adds, operative treatment should no longer be delayed, as such cases as these show that it is indispensable.

118. **Salvarsan in Syphilis.**—Stümpke summarizes his experiences as teaching that although there is little chance of eradicating syphilis with salvarsan at one blow, yet this should be the ideal aimed at, and consequently in recent infection an intravenous injection should be made, followed by another after a week. The second dose should not be given earlier than this, as witness, he remarks, the case reported by Fovento of Trieste—severe hemorrhagic nephritis developing at once after the second dose of salvarsan by intramuscular injection, the first having been intravenous, three days before. Repeated control by the Wassermann reaction is indispensable. He adds that at present no one knows how the syphilis is going to run its course as a whole after salvarsan treatment, and thus a certain expectant attitude is justified, although this should not deter from the use of salvarsan in cases with malignant manifestations or refractory to mercury, and early in syphilis in infants.

120. *Respiration Exercises in Treatment of Neurasthenia.*—Knopf has long been extolling the benefits of systematic breathing exercises as a kind of internal massage of the viscera, regulating the functioning of the liver, bladder and bowels besides the influence on the respiratory organs. The main feature of his exercises is that the deep inspiration and deep expiration succeed each other without any pause, and thus there is no stationary congestion in the parts. His success has been particularly good in stuttering, asthma and chronic bronchitis, and the diuretic and cholagogue action has given great relief in heart disease. He noticed that goiter seemed to be much influenced by the breathing exercises in certain cases, the thyroid increasing nearly half an inch in size during inspiration and subsiding again to even less size than at first during expiration. While studying the effect of the exercises on vascular goiter, he encountered a patient with a medium goiter who had had an extremely painful hemorrhagic gynecologic affection for three years. As during this period any breathing was painful, she did not use the abdominal muscles in breathing and they evidently atrophied. During the following years, as all deep breathing had ceased, there was no fluctuation in the blood-pressure in the brain. Consequently the vasomotor nerves and muscles in the brain suffered from disuse and the brain did not receive sufficient nourishment. The defective supply of blood

and nourishment of the brain explained the defective functioning of the brain, the cerebral neurasthenia, which had rendered the patient a physical wreck, as she said, irritable and depressed, with insomnia and tremor, the slightest physical exertion causing extreme shortness of breath and dizziness, the motor innervation morbidly sensitive to fatigue. All these symptoms vanished under the breathing exercises in such a short time and so completely that there can be no question of the correctness of the above diagnosis, made retrospectively. The exercises are done with the trunk bare, in front of a mirror, until the chest is seen to expand properly. At her first exercise, this patient nearly fainted during the deep inspirations and could proceed only after a brief rest each time. But in a day or so conditions improved and by the thirteenth day the patient no longer suffered from shortness of breath; appetite had returned, and the bowel functioning was normal. No other measures were attempted except the exercises.

122. **Wassermann Reaction from Forensic Standpoint.**—Placzek reports a case of criminal sexual actions in a young man who gave a positive Wassermann reaction as the first and only sign of inherited syphilis, previously unsuspected, but revealed by investigation of the antecedents.

124. **Lactation.**—Weiss concludes his study of the technic and indications for the most effective breast-nursing, with the statement that only serious chronic diseases, such as advanced nephritis, psychoses, retinitis, etc., may contraindicate nursing the infant in certain circumstances in which the physician must decide, but that there are no absolute indications forbidding the mother to nurse her child. Acute infectious diseases and mild febrile affections should not deter the mother from nursing; Salge has reported a case in which the mother with severe scarlet fever nursed her infant and Weiss has also had a case of the kind, both children thriving and escaping infection. Even when menstruation has returned, the children continue to increase in weight according to careful research by Jacobius at the Berlin Infant Dispensary.

126. **Gastric Ulcer.**—This is a continuation of the symposium on this question, the present contributions being from Hochenegg, Friedrich, Wilms and Borchardt on the indications for operative treatment of gastric ulcer, preferred mode of intervention and results to date.

127. **Importance of Endoscopy of Lower Air Passages.**—Ephraim comments on the lack of appreciation of the advantages of direct visual inspection of the air passages in dubious cases. Instead of wasting valuable time, the practitioner should resort to endoscopy which may clear up the diagnosis in a moment. Besides the disturbances from a foreign body in the air passages, he has had six recent cases of hemoptysis or dyspnea which endoscopy explained as due to a primary sarcoma in a bronchus or carcinoma in the lung, or stenosis from a goiter or aortic aneurysm. The hemoptysis in one of these cases had returned periodically for three years, and tracheobronchoscopy first revealed that the hemorrhages proceeded from varicose veins in the trachea which were then easily cauterized. He has never witnessed hemorrhage result from the endoscopy, and knows of no such case on record, not even recurrence of hemoptysis.

128. **Salvarsan in Small-Pox.**—Lenzmann gave salvarsan in each of three cases of small-pox. He reports that it proved harmless and a favorable influence seemed to be apparent.

130. **Substitute for Mountain Sunshine.**—Breiger ascribes the benefit from the sunlight at high altitudes to the preponderance of the ultraviolet rays, which induce a persisting active hyperemia, lasting for hours, without any tendency to sweating. He thinks that this same result can be accomplished with artificial light rich in the ultraviolet rays, and reports experiences in this line. He suggests that it opens possibly new horizons for treatment of tuberculosis, etc.

Mitteilungen aus den Grenzgebieten der Med. und Chir., Jena

XXIII, No. 1, pp. 1-168. Last indexed April 22, p. 1233

132 Prognosis of Extensive Resection of Small Intestine. (Prognose der ausgedehnten Dünndarmresektionen.) V. Lieblein.
133 *Ulcer in Jejunum After Gastro-Enterostomy. J. Exalto.
134 Experimental Research on Regeneration and Neoformation of Lymph-Glands. (Die anatomischen Grundlagen der Chirurgie der Lymphdrüsen.) A. Vecchi.
135 *Tardy Rachitis in Relation to Mineral Metabolism. (Zwei Fälle von sogen. "Spätrachitis." Der Mineralgehalt der Knochen und der Mineralstoffwechsel im Vergleich zu der kindlichen Rachitis.) J. A. Schabad.
136 Diagnostic Significance of Exaggerated Phloridzin Glycosuria. Caro.
137 *Curative Action of Normal Animal Serum on Suppurating Processes. L. Fejes and E. Gergo.
138 Hydrops of Total Bile System with Chronic Occlusion of Common Bile Duct. (Hydrops des gesamten Gallensystems bei chronischem Choledochusverschluss und seine Bedeutung für den Chirurgen.) W. Kausch.

133. **Peptic Ulcer After Gastro-Enterostomy.**—Exalto reviews the literature on this subject and reports extensive experimental research, all confirming the assumption that these ulcers after gastro-enterostomy are due to the action of the acid gastric juice on the intestinal mucosa, and that this acidity should be neutralized with alkalies in prophylaxis. After a gastro-enterostomy the patient should keep up an ulcer diet for a long time. His experience indicates that the posterior retrocolic gastro-enterostomy according to von Hacker, as near to the duodenum as possible, is least liable to be followed by a peptic ulcer.

135. **Tardy Rachitis.**—Schabad reports two cases of rachitis in sisters. One was a girl of 16 and the metabolic findings in regard to minerals are recorded and compared with the chemical findings in the bones after her death from tuberculous pleurisy, and with the metabolic findings in her twin sister. Schabad regards the trouble in this case as a juvenile chondrodystrophy, the lack of benefit from phosphorus-cod liver oil and other features distinguishing the trouble from ordinary rachitis.

137. **Horse Serum in Treatment of Suppuration.**—Fejes found that the bactericidal action of fresh normal animal blood-serum in the test-tube is apparent also when the serum is brought into contact with an infectious focus in the tissue. Gergo reports the application of this method in 100 cases in acute suppuration. He used normal horse or cattle serum, first aspirating the pus, then injecting a little serum into the focus to rinse it out, aspirating all excessive fluid, then covering the puncture hole with a scrap of sterile gauze, held in place with adhesive plaster. A single treatment is generally sufficient, and it seems to be immaterial what germs are involved or where the abscess is located. The functional and cosmetic results are superior to those obtained by any other means, while the bactericidal serum seems to induce a passive immunization, and there is also an active immunizing by the hyperleukocytosis and phagocytosis induced. He injects the serum with a needle which has no opening at the tip but a row around just below the tip, thus rinsing the walls of the cavity more effectually. A chill and serum exanthem may follow if care is not taken to aspirate out the superfluous serum. The main field for this serotherapy is in acute abscesses in the soft parts, but he has found it useful also in two cases of purulent bursitis and in several bone and joint lesions, but his experience in this line has not been enough for a definite verdict.

Münchener medizinische Wochenschrift

April 25, LVIII, No. 17, pp. 881-936

139 *Salvarsan in Cancer. (Erfahrungen mit Salvarsan bei malignen Tumoren.) V. Czerny and A. Caan.
140 Roentgen Rays in Diagnosis of Gastric Ulcer. (Zur Röntgendiagnostik des runden Magengeschwürs.) F. de Quervain.
141 *Radical Mastoid Operation. (Radikaloperation des Ohres.) K. Herschel.
142 The Salvarsan Question. A. Stühmer.
143 Pregnancy Diabetes. (Zur Kenntnis des sogen. Schwangerschaftsdiabetes.) H. Ehret.
144 Color Tests for Sugar, Creatin and Creatinin in the Urine. [illegible] G. Müller.
145 [illegible]) Understand Speech by the Movements [illegible] den Absehunterricht für Schwerhörige.) M. Nadoleczny.
146 Case of Tetanus Following Subcutaneous Administration of Radiolcarbenzym. K. Laubenheimer and A. Caan.
147 Secondary Syphilis in Monkeys and Rabbits. C. Grouven.

139. **Salvarsan with Cancer.**—Czerny and Caan report experiences with salvarsan in twelve cases of malignant tumor, the results, they say, justifying further trials in this line unless the patients are much debilitated. Sarcoma seems to

feel its effect most; there may be a stormy reaction at first. Their experience suggests that the ordinary doses should be repeated several times, possibly combining intravenous injection with a local injection into the tumor. Operable cancers should always be removed, of course, but in case of sarcoma with a positive Wässermann reaction it might be well to precede the operation with salvarsan, similarly to the Esmarch iodin treatment.

141. **Radical Operation on the Ear.**—Herschel pleads for immediate suture after the radical operation, with careful after-treatment to prevent formation of adhesions or recesses while promoting cosmetic healing. The best means to attain this, he thinks, is by filling the hole with small square gauze pads; this prevents excessive granulation. This he combats, besides, with silver nitrate, a bead of the nitrate melted on the end of a sound. This tamponing and cauterization gave good results, the healing period being much shortened by this and the primary suture in his fifteen cases, all the patients being completely cured in from four to seven weeks except one who required a second operation. The results for the hearing are better the earlier operative treatment is applied, and he urges practitioners not to delay too long, as, besides the annoyance from a suppurating ear, the danger from complications is like smoking when sitting on a powder keg. One of his patients, promptly cured by the technic described, had been treated daily for two years and every second day for four more years by an ear specialist, while the ear kept on calmly suppurating. It has been his frequent experience that conditions were found much worse than had been anticipated when the region was opened up. In one such case the mastoid process had not been at all tender, yet the cells were found filled with pus even up to the sinus. The ear had been suppurating for years and there was a fistula in the hammer region, but the suppuration seemed to have much declined of late and there had never been any threatening symptoms. He operated only on the desire of the patient to be delivered from the annoying running of the ear, and rejoiced indeed that he had done so when he found the mastoid process thus riddled with disease. It is far better, he declares, to operate and possibly find in a few instances lesions apparently less serious than had been suspected, than to let a single case like this escape the radical operation which soon would have come too late to save the hearing or possibly the life.

Virchows Archiv, Berlin

April, CCIV, No. 1, pp. 1-160

148 Histomechanics of the Vascular System and Pathogenesis of Angiosclerosis. R. Thoma.
149 Neoformation of Blood-Vessels. (Neubildung von Blutgefässen.) R. Minervini.
150 Multiple Primary Carcinomas. S. Pusateri.
151 Case of Papilliferous Mammary Adenocarcinoma with Papillary Metastases in the Axillary Glands. S. Pusateri.
152 Contribution to the Adenomyoma Question. (Nachnierenkanälchen mit Glomerulusanlage in der Leistengegend beim menschlichen Embryo.) R. Meyer.
153 Mitosis with Non-Malignant Epitheliomas. (Verhalten der Mitosen bei den gutartigen papillären Epitheliomen.) J. Catsaras.
154 Changes in Stomach with Pernicious Anemia. (Magenveränderungen bei perniziöser Anämie.) S. Herzberg.

Wiener klinische Wochenschrift, Vienna

April 27, XXIV, No. 17, pp. 583-618

155 Salvarsan in Syphilis in Children: Twenty-Six Cases. (Heilwirkung des Salvarsans bei der Lues des Kindesalters.) J. v. Bokay, L. Vermes and Z. v. Bokay.
156 *Diagnosis and Pathogenesis of Cholelithiasis. E. Biernacki.
157 Case of Alternating Tetany and Epilepsy. (Tetaniceepilepsie.) A. Luger.
158 Alizarin Indicator for Titrating Alkali in the Blood. (Neuer Indikator zur Bestimmung des titrierbaren Alkalis im Blute.) P. Bernhardt.

156. **Gall-Stones.**—Biernacki's experience has convinced him that gall-stone disease is one of the manifestations of the uric-acid diathesis; it is frequently accompanied by other signs of this uric-acid tendency. He has noticed a certain regularity in the development of the gall-stone troubles; a number of attacks may occur over a period of six to eight weeks and then there may be a pause for several months. The patients frequently connect the attacks with certain seasons. During these periods the slightest error in diet may bring on the colic, while during the intervals gross errors in diet are tolerated without harm. These free intervals explain the benefit frequently ascribed to certain drugs or measures which the patient happened to be taking at the time the free interval arrived. Biernacki says that he has had many patients with typical attacks of pains, fever and jaundice a year or two after they had been operated on for gall-stones. Some of his Carlsbad patients of this class figure in the literature as "cured operative cases." He believes that so long as the tendency to cholecystitis persists there will be new formation of concrements. Dietetic prophylaxis is the main thing, avoiding excess in eating; and highly seasoned food and alcohol.

Zeitschrift für Geburtshülfe und Gynäkologie, Stuttgart

LXVIII, No. 1, pp. 1-259. Last indexed Feb. 18, p. 551

159 Venous Myomas of the Uterus with Intravascular Growth. A. Sitzenfrey.
160 No Evidence from Experimental Research Reported that Eclampsia is Due to Anaphylaxis. F. Fellländer.
161 *Organotherapy of Osteomalacia. (Zur Klinik und Organotherapie der Osteomalacie, nebst anatomischen Untersuchungen über die "interstitielle Eierstocksdrüse.") R. Stern.
162 Antiseptic Lavage of the Vagina in Obstetrics. (Sind die antiseptischen Scheidenspülungen bei der Geburt bakteriologisch begründet?) O. Burckhardt and K. Kolb.
163 Origin of Mammary Glands in the Axilla. (Zur Genese der Achselhöhlenmilchdrüsen.) A. von der Heide.
164 Anaerobic Blood-Cultures in Puerperal Fever. (Infektion und Fäulnis.) A. J. M. Lamers.
165 *Necessity for Microscopic Examination of Assumed Recurrences of Cancer of the Uterus. A. Sitzenfrey.
166 *Resuscitation of New-Born Infants. (Behandlung des Scheintods Neugeborener.) F. Ahlfeld.
167 Leukoplakia of the Uterus. J. Hofbauer.

161. **Osteomalacia.**—Stern reports the case of a woman of 41 who had borne eight children, and osteomalacia developed after her sixth delivery. She was treated with milk from a castrated goat. Great benefit followed as in Fränkel's case, but this improvement was not a complete cure, and the symptoms recurred after a stationary period of several weeks. The ovaries were then removed and a complete cure was soon realized except for the irreparable lesions. The case sustains the assumption of an internal secretion of the ovary and its antibody, but his further research to study the subject still closer gave negative findings.

165. **Necessity for Microscopic Examination of Alleged Recurring Cancer.**—Sitzenfrey reports a case in which a woman, 46 years old, had the uterus removed for an adenocarcinoma, six years after the death of her consumptive husband. Three months later a local ulceration was assumed to be recurring cancer but the microscope revealed that it was a tuberculous process in the retroperitoneal tissue, evidently infected from the intestines. The diarrhea observed the fourth day after the first operation, had evidently been due to tuberculous intestinal ulcers. The second laparotomy in this case revealed inoperable tuberculous conditions. If the excised scrap had been examined with the microscope in time, the patient would have been spared this useless second operation. In another case the supposed recurrence proved to be merely granulation tissue but this was not ascertained until after a number of lymph-glands had been removed; the enlargement of the lymph-glands was probably due merely to the inflammation after the radical operation, kept up by the trauma from daily vaginal irrigation. Sitzenfrey believes that such mistakes in the diagnosis of recurring carcinoma are more common than generally recognized. Wertheim says that the cicatricial tissue after his abdominal hysterectomy is liable to be heavy and tough, so that his assistants have frequently diagnosed recurrences in these harmless lumps, especially when the tissue is the seat of an inflammatory process.

166. **Resuscitation of New-Born Infants.**—Ahlfeld emphasizes that the causes and clinical picture of the asphyxia of new-born infants vary from case to case, so that individualized treatment is imperatively necessary. In order to ensure this, he clears the child's upper air passages and places it at once in a bath tub, keeping the water constantly at 38 to 40 C. (100.4 to 104 F.). All the examination of the child is done in the hot water. He insists that the umbilical cord should be cut at once in case of asphyxia; no change that can benefit the child can occur by means of the placental circulation, and

consequently there is no use in leaving it with the mother. In the hot water the capillaries of the skin filled with blood relieve the congested organs and the stimulus from the change from room temperature to that of the hot water has a powerful action on the circulation. It is then easy to inspect the child and estimate its viability and determine whether the air passages are free or not. He adds two more to the four cases he has previously published, in which the child breathed but there was no action on the part of the heart; on the other hand, a new-born child may be dead and yet its heart may keep beating. This renders it difficult to distinguish actual from apparent death of new-born infants, and this decision is much facilitated by observation of the child in the hot water. If the air passages cannot be cleared, he holds the child up by its legs for fifteen seconds, tapping its thorax and watching to see if mucus drips from its mouth or nostrils. If these manipulations fail, he wraps the child in a hot blanket and introduces a flexible catheter to aspirate the phlegm in the trachea and bronchi. If the passages can be cleared in this way, the viable child makes a deep inspiration and the heart action soon revives. Measures should be at hand for these procedures at every childbirth, and especially when there are pathologic conditions. Vigorous friction of the child's body has proved the best stimulus at this stage; the child is wrapped with hot cloths and is replaced in the hot water between each manipulation, pouring in hot water to keep the temperature at the desired height. Insufflation through a catheter and Schultze's swinging may effectually supplement the other measures, but the swinging is contraindicated with weakly and deformed children, the prematurely born and those injured during birth, as also when there is suspicion of pressure on the brain. For this the hot bath is the best of all measures, possibly supplemented by a little venesection. Ahlfeld adds that if after half an hour of these measures there is no sign of life, except the contractions of the heart, there is no hope of reviving the child and further efforts are merely to satisfy oneself and the family that nothing has been left undone. He cites a number of typical cases to show the various factors responsible for the asphyxia in different cases.

Zentralblatt für Chirurgie, Leipsic

April 29, XXXVIII, No. 17, pp. 597-628

168 *Operative Treatment of Varicocele. G. Nilson.

168. **Treatment of Varicocele.**—Nilson has operated in sixty-five cases by the technic of which he gives an illustrated description. It requires only fifteen minutes to complete it or less, and is done under local anesthesia. The stumps of the vein are drawn such a distance apart that there can be no question of regeneration of the blood canal later, while the testicle is safely suspended from the internal abdominal muscles. The long lower stump of the vein is drawn through behind the lower fibers of the common aponeurosis of the internal and transverse oblique muscles which are separated from the front of the rectus without disturbing the lay of the fibers or cutting them. This holds the testicle firm while effectually preventing, he says, recurrence of the varicocele.

Zentralblatt für Gynäkologie, Leipsic

April 29, XXXV, No. 17, pp. 641-672

169 *Childbirth in Progressive Muscular Atrophy. (Geburt bei Dystrophia musculorum progressiva Erb.) F. Gutzmann.
170 Ovariotomy During Delivery by Cesarean Section. (Weiterer Fall von Ovariotomie intra partum mit Kaiserschnitt.) A. Hesselbach.
171 Connection Between Ovulation and Conception. (Beziehung der Konzeption zur Menstruation.) S. Chazan.

169. **Childbirth with Progressive Atrophy of the Muscles.**—Gutzmann adds another to the two such cases on record; in all the period of expulsion was extremely protracted. This confirms the importance of the action of the abdominal muscles in delivery.

Gazzetta degli Ospedali e delle Cliniche, Milan

April 16, XXXII, No. 46, pp. 483-498

172 The Hypophysis Cerebri in Relation to Obesity. (Sulla patogenesi della degeneratio adiposo-genitalis.) G. A. Pari.

April 18, No. 47, pp. 499-506

173 Influenzal Peritonitis. M. Lodi.

April 20, No. 48, pp. 507-514

174 Hysteric Trophic Superficial Processes. (Disturbi trofici della cute di origine isterica.) C. Coniglio.

April 23, No. 49, pp. 515-530

175 *Test for Albumose in Urine. (Il mio metodo di ricerca dell' albumosuria.) U. M. Fittipaldi.

175. **Test for Albumose in the Urine.**—Several years of experience have confirmed, Fittipaldi says, the advantages of his technic for detection of albumose in the urine. The presence of considerable albumin does not interfere with the findings. After precipitation with alcohol the precipitate is dissolved in soda solution, 31 or 32 per cent. The solution is then tested with a 5 per cent. solution of nickel sulphate mixed with equal parts of ammonia. A few drops of this mixture are added to the alkaline solution, and the presence of products of proteolysis is revealed by an orange-yellow tint. This test reveals the presence of albumosoids in a proportion of 4 to 10,000, or less. It is less sensitive than some of the other technics, he declares, but it is a reliable one. He quotes a number of authors who have reported favorably on his technic.

Policlinico, Rome

April 16, XVIII, No. 16, pp. 485-516

176 Blood Pigment in Urine not Pathognomonic of Malaria. (Sopra un preteso segno patognomonico della infezione malarica.) C. Mars.

April 23, No. 17, pp. 517-552

177 *Improved Test for Indicanuria. (Nuovo metodo per la ricerca dell' indacano nelle urine.) M. Barberio.

177. **Nitrite Test for Indican in the Urine.**—Barberio comments on the great importance of examining the urine for indican as a sign of disease, and recommends a 1:2000 solution of sodium nitrite for the reagent. This keeps well; 2 or 3 drops are mixed with 5 c.c. of filtered urine and well shaken. Then 5 c.c. of concentrated hydrochloric acid and 2 c.c. of chloroform are added. The tint changes from clear yellow to violet; the chloroform, colorless at first, changes to blue, while the supernatant fluid is dark yellow, pinkish or violet. Comparison of the findings with this technic and with Obermayer's shows that the chloroform takes up the indigo blue more rapidly and intensely with the former. The rapidity of the technic avoids the formation of indirubin and thus protects against another source of error, but its chief advantage is that the reagent, the sodium nitrite solution, is so easily prepared, so stable and acts so promptly, thus adapting it for every-day routine practice.

Riforma Medica, Naples

April 17, XXVII, No. 16, pp. 421-448

178 *Sulphur Reaction in Urine with Cancer. (Sull'aumento degli acidi ossiproteinici nelle orine di carcinomatosi.) H. Salomon and P. Saxl.
179 Regeneration of Blood in Anemic Animals Under Quinin. (La rigenerazione del sangue nelle anemie da sottrazioni sanguigne in animali chinizzati.) D. De Sandro.
180 *Lumbar Puncture in Cerebral Hemorrhage. A. Rossi.

178. **Sulphur or Oxyproteic Acid Reaction in the Urine with Cancer.**—Salomon and Saxl give in condensed form the technic for determination of the proportion of oxyproteic acid in the urine in relation to the total nitrogen. In the healthy the proportion is about 1.2 per cent., but in case of cancer the oxyproteic acid nitrogen seems to range from 3 to 4.5 per cent. Their technic was given in detail recently in THE JOURNAL, May 27, page 1593.

180. **Lumbar Puncture in Cerebral Hemorrhage.**—Rossi has been applying lumbar puncture for diagnosis and estimation of the prognosis in cases of cerebral hemorrhage, and here gives the clinical history and necropsy findings in seven cases. They show that admixture of blood with the cerebrospinal fluid indicates very serious conditions. When the hemorrhage into the brain occurs suddenly, the gravity of the case depends on the amount of blood pouring out into the tissues and into the cerebrospinal fluid. When the cerebral hemorrhage occurs more insidiously, the symptoms are mild at first, but they increase rapidly in gravity from the reaction on the part of the meninges, etc. The presence of blood in the cerebrospinal fluid in this class of cases warns of impending danger, notwithstanding the mildness of the symptoms at first. The discovery of blood in the spinal fluid further serves to differentiate cerebral hemorrhage from conditions which might

otherwise be confounded with it, such as embolism, congestions, epilepsy, encephalitis and uremic and diabetic coma. The nine typical cases reported represent examples of each of these three groups.

Hospitalstidende, Copenhagen

March 22, LIV, No. 12, pp. 305-328

181 *Favorable Influence of Exposures to the Arc Light on Respiration in Heart Disease. (Undersøgelser over den universelle Buelysbenandlings Virkning paa Respirationen ved Hjertesygdomme.) V. Rubow and C. Sonne.
182 Case of Multiple Sclerosis with Conjugate Ocular Paralysis of the Voluntary Lateral Movements with Retention of Vestibular Reflex Movements. H. Rønne.

March 29, No. 13, pp. 329-360

183 *Wassermann Reaction in the Blind, Deaf Mutes and Epileptics of Denmark's Asylums. (En Undersøgelse af Blinde, Døvstumme og Epileptikere i Danmark ved Hjælp af Wassermann's Reaktion.) O. Thomsen and W. Leschly.

April 5, No. 14, pp. 361-384

184 *Salvarsan in Syphilis. H. Boas. Commenced in No. 13.
185 Site of Principal Lesions in Advanced Tuberculosis. (Hvilken Lunge findes fortrinsvis angreben ved Lungetuberkulosens sidste Stadium?) K. Secher.

April 12, No. 15, pp. 385-416

186 Spirometer Findings in Pulmonary Disease. (Spirometriske Undersøgelser hos Brystsyge.) F. Tobiesen.
187 *Blotting-Paper Test for Free Hydrochloric Acid in Stomach Content. (En ny Metode til Bestemmelse af den fri Saltsyre i Mavesaften.) I. Holmgren.
188 Two Cases of Volvulus. H. v. Thun.

181. **Effect of Arc Light Exposures on Respiration in Heart Disease.**—Rubow and Sonne report experiences which show that arc light exposures have a marked influence on the respiration in heart disease, rendering it slower and less shallow and thus relieving the dyspnea. They record the findings in a number of cases before and after exercise, the effect of the arc light exposures far surpassing that attainable by any other means. The results confirm in every respect Hasselbalch's statements in regard to this action on the respiration. His research was on healthy persons, but Rubow and Sonne have applied the procedure to supplement the ordinary measures, rest, dieting and heart tonics, in heart disease, when the dyspnea still persisted after their systematic application. Unless the arc light induces an erythema it does not have the desired effect on the respiration. The incandescent light baths in common use lack the ultraviolet erythem-inducing rays, and thus fail to have the same effect on the respiration as the arc light.

183. **The Wassermann Reaction in Deaf-Mutes and Epileptics.**—Thomsen and Leschly have previously reported their findings in regard to the Wassermann reaction among the inmates of the asylums in Denmark, and they here report that the findings were constantly negative in 146 blind inmates and in all but 3 of 344 deaf-mutes and 1 of 259 epileptics. There were no signs or history of syphilis in two of the cases with a positive reaction, but there was a history of keratitis at one time in the two others.

184. **Salvarsan in Syphilis.**—Among the fourteen syphilitics whom Boas treated with salvarsan, two seemed to be uninfluenced by the medication, while he has not encountered a single refractory patient among the last 302 patients given mercurial treatment. Only two of the entire fourteen have been free from recurring symptoms to date. In several cases there was persisting local infiltration and 0.028 gm. of arsenic was recovered in one case from the necrotic tissue which sloughed off for months after the injection. This patient was entirely incapacitated for business for several months after the injection, as a direct consequence of it. One patient presented symptoms of acute arsenic poisoning after the injection, with edema and erythema of the face, paresthesia in fingers and toes, vomiting, headache and high fever. The edema persisted for sixteen days. Another patient three weeks after the injection developed pains radiating from the focus to the neck, with vertigo. Even in the most favorable cases, Boas affirms, the symptomatic benefit was no more pronounced than is usual under mercury. There was recurrence of symptoms earlier than under the old treatment. He mentions further a fatality recently reported by Morata; a young man, healthy except for a mild recurrence of syphilis two years after infection (papules in the mouth and adenitis universalis), vomited blood three hours after intravenous injection of 0.04 gm. salvarsan; anuria and collapse followed and he died the next day in coma, necropsy showing intense congestion of the epithelium of the kidneys evidently arresting renal functioning completely. Boas' final conclusions are to the effect that salvarsan should be reserved exclusively for the cases in which ordinary treatment has failed.

187. **The Blotting-Paper Test of Gastric Acidity.**—Holmgren's application of capillary attraction to quantitative estimation of the free hydrochloric acid in the stomach content was described in The Journal, March 18, 1911, page 857.

Books Received

Books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. Selections will be made for review in the interests of our readers and as space permits.

Mysteries of Life Series. By Isabelle T. Smart, M.D., Medical Examiner of Defective Children, Department of Education, City of New York. Book 1: What a Mother Should Tell Her Little Girl. Pp. 105. Book 2: What a Mother Should Tell Her Daughter. Pp. 105. Book 3: What a Father Should Tell His Little Boy. Pp. 116. Book 4: What a Father Should Tell His Son. Pp. 103. Cloth. $2.50 per set; 75 cents per volume. New York: The Bodmer Publishing Co., 1911.

Hydrotherapy for Students and Practitioners of Medicine. Embodying a consideration of the Scientific Basis, Principles and Practice of Hydrotherapy and some allied Branches of Physiologic Therapy. By G. K. Abbott, M.D., Dean of the Faculty and Professor of Hydrotherapy and Practice of Medicine in the College of Medical Evangelists. Cloth. Price, $3. Pp. 308, with 30 illustrations. Loma Linda, Cal.: The College Press, 1911.

One Thousand Surgical Suggestions. Practical Brevities in Diagnosis and Treatment. By W. M. Brickner, B.S., M.D., New York, Adjunct Surgeon, Mount Sinai Hospital. With the Collaboration of E. Moschcowitz, M.D., J. P. Warbasse, M.D., and H. Neuhof, M.D., New York, Associate Editors, American Journal of Surgery. Fourth Edition. Cloth. Price, $1. Pp. 227. New York: Surgery Publishing Co., 1911.

Index-Catalogue of Medical and Veterinary Zoology. Part 33. (Authors: W to Werbitzki.) By C. Wardell Stiles, Ph.D., Consulting Zoologist, Bureau of Animal Industry, and Albert Hassall, M.R.C.V.S., Assistant Zoologist, Bureau of Animal Industry. U. S. Dept. of Agriculture, Bureau of Animal Industry, Bull. No. 39. 1911.

Contributions to Medical Science. By Howard Taylor Ricketts. 1870-1910. Published as a Tribute to His Memory by His Colleagues Under the Auspices of the Chicago Pathological Society. Cloth. Price, $5.33. Pp. 497, with illustrations. Chicago: The University of Chicago Press.

Ueber Morbidität und Mortalität des Menschen, zugleich ein Beitrag zur Frage der Konstitution. Von Dr. Julius Bartel, Privatdozent und Assistent am Pathologische-Anatomischen Universitäts-Institut in Wien. Paper. Price, 2.50 marks. Pp. 95. Vienna: Franz Deuticke, 1911.

Transactions of the American Association of Genito-Urinary Surgeons. Twenty-Third Annual Meeting, held at George Washington University, Washington, D. C., May 3-5, 1910. Vol. V. Paper. Pp. 409, with illustrations. New York: F. H. Hitchcock, 1911.

Siebenundachtzigster Jahres-Bericht der Schlesischen Gesellschaft für vaterländische Cultur. Enthält den Generalbericht über die Arbeiten und Veränderungen der Gesellschaft im Jahre 1909. Paper. Pp. 69. Breslau: G. P. Aderholz, 1910.

Some Neglected Factors in Evolution. An Essay in Constructive Biology. By Henry M. Bernard, M.A. Cantab, F.Z.S. Edited by Matilda Bernard. Cloth. Price, $3 net. Pp. 489, with 47 illustrations. New York: G. P. Putnam's Sons, 1911.

Handbook of the Trees of the Northern States and Canada East of the Rocky Mountains. By Romeyn B. Hough, B.A., Author of "American Woods." Cloth. Price, $8. Pp. 470, with illustrations. Lowville, N. Y.: R. B. Hough, 1907.

American Association for Study and Prevention of Infant Mortality. Transactions of the First Annual Meeting. Paper. Pp. 356, with illustrations. Johns Hopkins University, Baltimore, Nov. 9-11, 1910.

Papers Read Before the American Society of Tropical Medicine and Published Under Its Auspices. Volume V, 1910. Paper. John M. Swan, Secretary, 1818 Lombard St., Philadelphia.

Annual Report of St. Joseph's German Hospital of Baltimore, in Charge of the Sisters of the Third Order of St. Francis. For the Year 1910. Paper. Pp. 48.

The Nervous Life. By G. E. Partridge, Ph.D., Formerly Lecturer in Clark University. Cloth. Price, $1 net. Pp. 216. New York: Sturgis & Walton Co., 1911.

Die Neuralgien der täglichen Praxis. Von Dr. O. Schellong, Arzt in Königsberg i. Pr. Paper. Price, 1.80 marks. Pp. 83. Berlin: Julius Springer, 1911.

Reminiscences of Linda Richards, America's First Trained Nurse. Cloth. Price, $1 net. Pp. 121. Boston: Whitcomb & Barrows, 1911.

St. Luke's Hospital Medical and Surgical Reports. Volume II, 1910. Paper. Pp. 253, with illustrations. Poughkeepsie, N. Y.: F. B. Howard.

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THE POSSIBLE DIAGNOSIS AND A TECHNIC IN EXCISION OF A CHRONIC INDURATED ULCER OF THE POSTERIOR WALL OF THE STOMACH *

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OMAHA, NEB.

The technic of operations on the stomach for ulcer, curiously enough, followed that for cancer, and the radical operation for ulcer situated near the pylorus is practically identical with that for cancer. To-day we are in many instances operating on ulcer not only to relieve the symptoms for which it is directly responsible, but to prevent cancer development on the ulcer base. The physician, more particularly the stomach specialist, hardly has a fair chance to study the relationship between ulcer and early cancer; for such knowledge we must go to the surgeon who, having a large experience in stomach surgery, excises, whenever possible, all chronic calloused ulcers and submits each specimen to the examination of an expert pathologist. In the Mayo clinic 71 per cent. of excised cancers of the stomach were found to have developed on an ulcer base, and doubtless many excised chronic calloused ulcers, if carefully examined, will be found to be undergoing early cancer changes; hence, wherever the location, wide excision, outside of the area of induration, is imperative as a logical surgical procedure. Not much has been written about excision of chronic ulcers of the posterior wall of the stomach (saddle-bag ulcer not considered); in fact, nothing of value with which I am familiar, prior to Coffey's beautifully illustrated article,[1] in which he describes among others, one case of this type, and an article by W. J. Mayo.[2] In Coffey's case, direct attack by excision through an opening in the gastrohepatic omentum was employed. Mayo describes and illustrates effectively, "transgastric excision of calloused ulcer of the posterior wall of the body of the stomach"; five patients have been operated on by him successfully after this technic. A note at the end of Mayo's article credits L. S. Pilcher with having made a successful transgastric excision of an ulcer of the posterior wall of the stomach in a similar manner.[3]

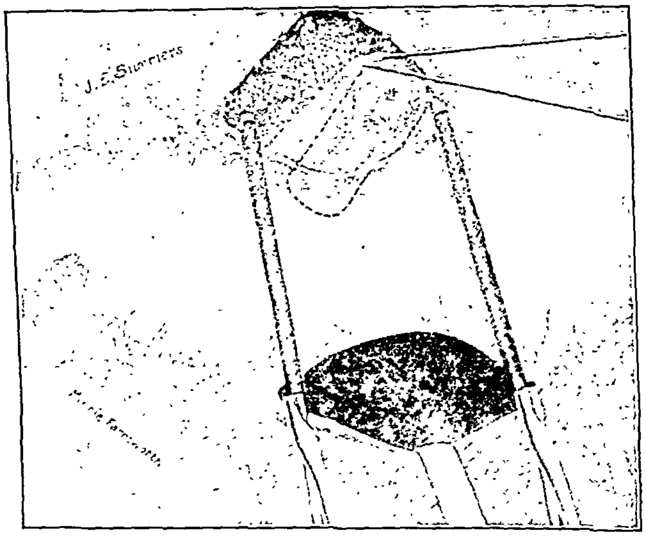

Fig. 1.—Gastrohepatic and gastrocolic omentum opened; ulcer freed, showing perforation and area of induration.

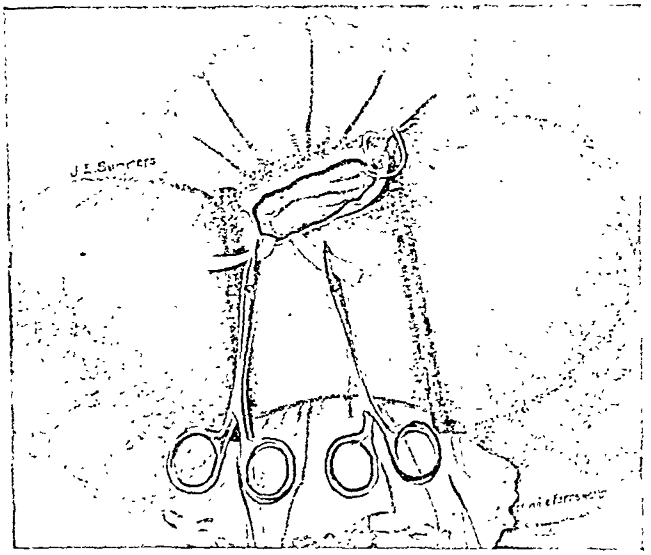

Fig. 2.—Lesser cavity of the peritoneum packed off; gauze packing in stomach.

Very few ulcers of the posterior wall of the body of the stomach have been attacked surgically. Moynihan ("Abdominal Operations") does not describe a technic, writing, "Though I have often found large adherent ulcers on the hinder surface (stomach) I have never been prevented from doing the usual operation" (posterior gastro-enterostomy).

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* Read before the Nebraska State Medical Association, May 3, 1911.

[1] Coffey, R. C.: Surgical Treatment of Ulcers Along the Lesser Curvature of the Stomach, Surg., Gynec. and Obst., December, 1910, p. 545.

[2] Mayo, William J.: Transgastric Excision of Calloused Ulcer of the Posterior Wall of the Body of the Stomach, Ann. Surg., December, 1910, p. 797.

[3] Case reported in the Long Island Med. Jour., May, 1908.

Our knowledge of the different forms and locations of gastric ulcer has been made possible only by a careful study of the subjective and objective symptoms and by comparing them with the operative findings. To date we have learned little from other methods, including the x-ray. I shall incorporate the essentials of the history of a case referred to me, as the symptoms differ somewhat from those commonly given of ulcer of the stomach, and may aid toward a recognition of chronic ulcer of the posterior wall of the stomach, particularly where its base is adherent to the pancreas or other structures.

REPORT OF CASE

During the latter part of December, 1910, Dr. A. D. Dunn of Omaha, turned over to me for operation in the Clarkson Hospital a man giving an undoubted history of chronic gastric ulcer. The notes on history and examination are by Dr. Dunn.

History.—"W. H., policeman, aged 40, married, was first visited Oct. 7, 1910. Family history negative. During the past two years, with a gradual onset, there had been, commencing about half an hour after meals, a sense of fulness and heaviness in the epigastrium with some belching; this condition would last one to two hours. The discomfort was greater after a full meal, and was *increased* by sour vegetables and condiments. One year before the man had vomited blood. For the past two months he had vomited blood frequently and for several weeks blood had been present daily in the vomitus; his stools had been tarry, and he had rapidly grown pale and weak. Blood showed 2,500,000 reds and 30 per cent. hemoglobin; there was marked tenderness in the epigastrium; he complained bitterly of pain across the back, which was worse after eating; there was a hyperesthetic, tender area to the left of the tenth, eleventh and twelfth dorsal vertebræ. The patient was sent to the hospital and put on a Lenhartz diet. The course was completed in six weeks, at the end of which time the blood had disappeared from the stools; vomiting had ceased and he was largely free from pain; he returned home. One night he overate; the epigastric pain recurred with intensity and blood reappeared in the stools; he complained of pain in the region of the heart, which usually *commenced between* 11 and 12 o'clock at night and lasted until 3 or 4 in the morning. There was intense soreness and heaviness in the testicles, which made it difficult for him to rise from his chair.

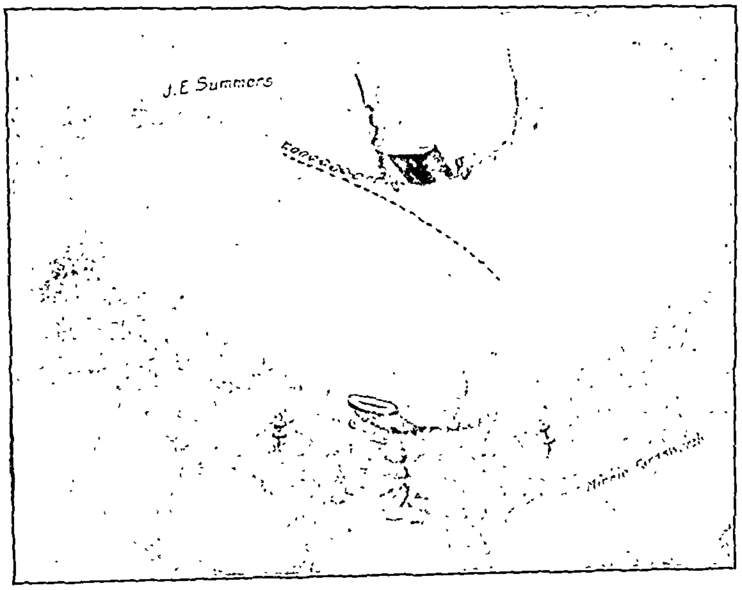

Fig. 3.—Dotted line, sutures in the posterior wall of the stomach; the repaired openings in the gastrohepatic and gastrocolic omentum; cigarette drains.

Examination.—"Dec. 8, 1910: Patient is much improved in general appearance. There is marked tenderness and rigidity in the epigastrium; the fifth, sixth and seventh interspaces in the nipple line are exquisitely tender, as is the whole right and left dorsal area on both sides from the sixth to the twelfth dorsal vertebræ. Both testicles are hyperesthetic but do not appear abnormal. A test breakfast shows a total acidity of 82; hydrochloric acid, 60; blood present. No retention after eight hours from a test meal.

"The patient returned to the hospital and after one week's starvation a modified Lenhartz diet was again instituted. During three weeks there was little improvement; pain persisted to the extent of making his nights miserable and the stools were rarely free from occult blood. As soon as any increase was made in the diet the pain would be aggravated and the occult blood would be in greater evidence. Inasmuch as there had been no satisfactory results from medical treatment, and the patient's physical condition and the blood findings (reds 5,000,000, whites 5,500, hemoglobin 85 per cent.) were such as to warrant an operation, it was deemed the proper moment for surgical intervention in an obstinate and persistently bleeding ulcer."

Operation.—I operated on Dr. Dunn's patient in the Clarkson Hospital Jan. 2, 1911. The ulcer was situated on the posterior wall of the stomach; it was large and indurated. The anterior wall of the stomach could be invaginated into the ulcer base to the depth of one-half the length of the last phalanx of the thumb. After the usual application of stomach clamps the gastrohepatic omentum and the gastrocolic omentum were opened as indicated in Figure 1, and with gauze protection the ulcer was freed from firm posterior attachments, in the doing of which I perforated the base, opening the stomach. The ulcer base was so adherent to the pancreas that I am inclined to believe perforation with adhesion had already taken place. The induration extended over and across the lesser curvature; I might designate the ulcer as a "turned saddle." Before the ulcer was excised the cavity of the lesser peritoneum was packed off as indicated in Figure 2, and as it was excised the stomach was lightly stuffed with gauze for further protection of the wound—also shown in Figure 2. Figure 3 illustrates well the line of sutures in the posterior wall; there were two continuous, a through-and-through (not the Connell) and an imbedding musculoperitoneal. Figure 3 also shows the closed gastrohepatic and gastrocolic temporary wounds for technic. Two large cigarette drains were introduced, each to the line of suture in the stomach wall and coming out, the one at the upper end of the abdominal incision and the other at the lower. Our patient has, to date, made a most excellent recovery.

The peculiar pains complained of may be explained by the posterior adhesions. The splenic artery runs along the upper border of the pancreas as a rule, but I have seen one case of fatal hemorrhage from a gastric ulcer which ulcerated into the splenic artery running within the pancreas tissue. Cases of fatal hemorrhage from gastric ulcer have been reported in which the ulcerated splenic artery was the source, but whether or not a variation in the usual position of the vessel was the reason, I am not informed. Brinton says that 58 per cent. of fatal gastric hemorrhages come from the splenic artery. The possible relation of an ulcer of the posterior wall of the stomach to the splenic artery would suggest extreme gentleness in the freeing of adhesions.

DEFINITE KNOWLEDGE OBTAINED BY MEANS OF THE X-RAY *

E. M. SALA, M.D.
ROCK ISLAND, ILL.

While it is possible for an expert photographer so to alter x-ray negatives and prints that they may be made to represent almost anything, yet there can be no question about the x-ray's wide range of usefulness in solving the many perplexing problems with which the surgeon is continuously confronted.

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* Read before the Western Surgical Association, Chicago, December, 1910.

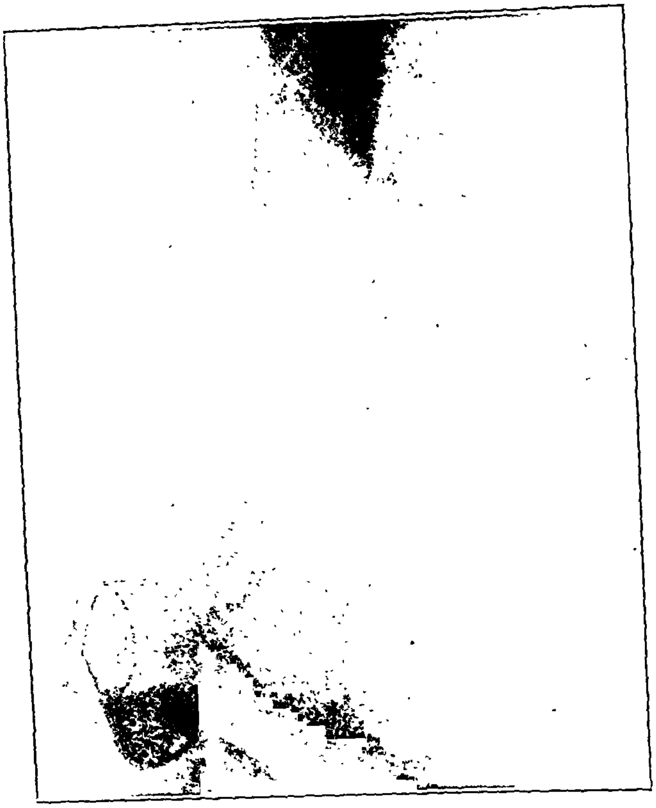

Fig. 1.—This (Case 1) illustrates very well what was considered a fairly good result in fractured femur preceding the time of the *x*-ray. Here we have not to exceed one inch of shortening in a lateral union of a square break. This fracture was adjusted by several physicians and thought to be in perfect position.

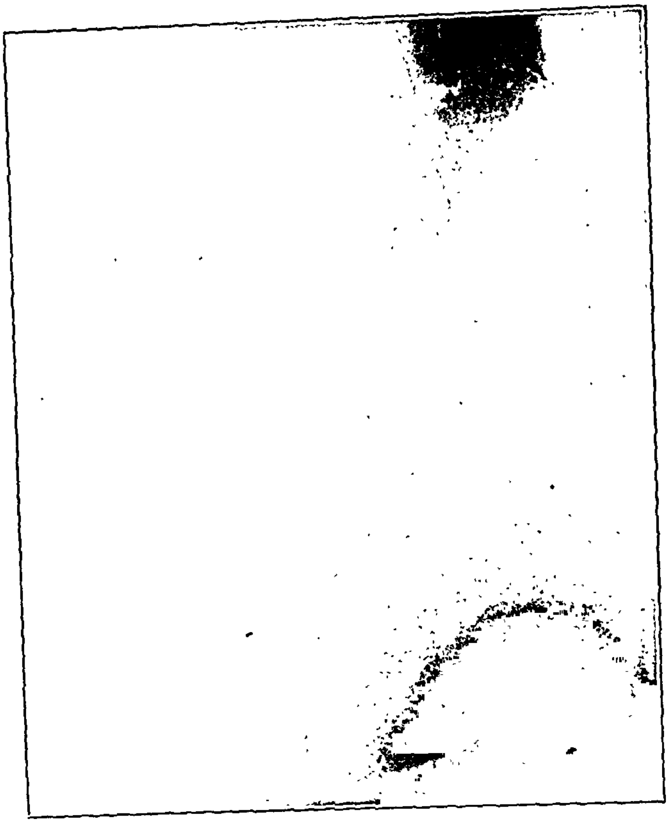

Fig. 2.—Another view of fracture (Case 1) shown in Figure 1. While the patient has a very good result for a fractured femur, yet it is not quite what we should expect with the aid of the *x*-ray. In this illustration and in Figure 1 the outlines of the bone have been reenforced in order that they might be clear after reduction and reproduction.

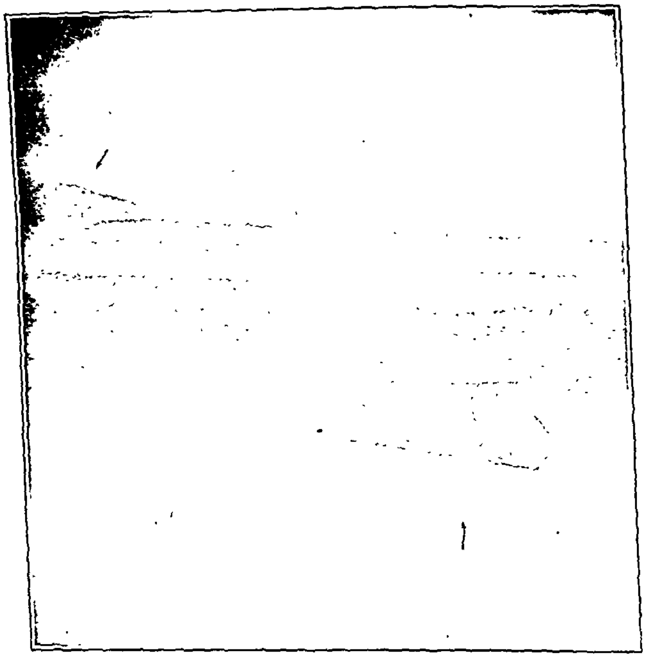

Fig. 3.—Double compound fracture of tibia and comminuted fracture of fibula. This (Case 2) shows how necessary it is to take exposures from two or more directions in order to have a correct understanding of the existing deformity. This patient was injured in an automobile accident and escaped with only his life; he sustained other serious injuries besides the one here shown. Owing to the shock and other conditions present it was thought best not to operate on him and readjust the fragments as they should be. The main efforts were exerted to save his leg from amputation. This was accomplished by the aid of an ambulatory splint and the application of plaster-of-Paris molds.

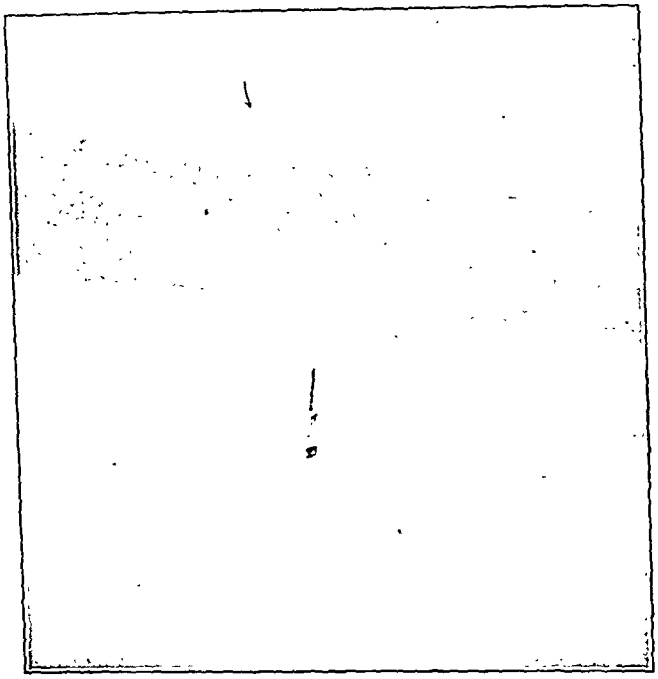

Fig. 4.—Lateral view of double compound comminuted fracture of tibia and fibula (Case 2). The patient now, six months after accident, is walking on the leg without any apparent evidence of shortening. He has discharged some small pieces of bone and has experienced a rather protracted disability, but the result seems as good as we could have obtained by an operation so far as usefulness is concerned. New bone has bridged across the gap caused by the displaced fragment of bone, the fragment has grown to the new bone and the whole leg seems strongest at what would appear to be its weakest point. In this and Figure 3 also the outlines of the bone in the radiograph have been reenforced.

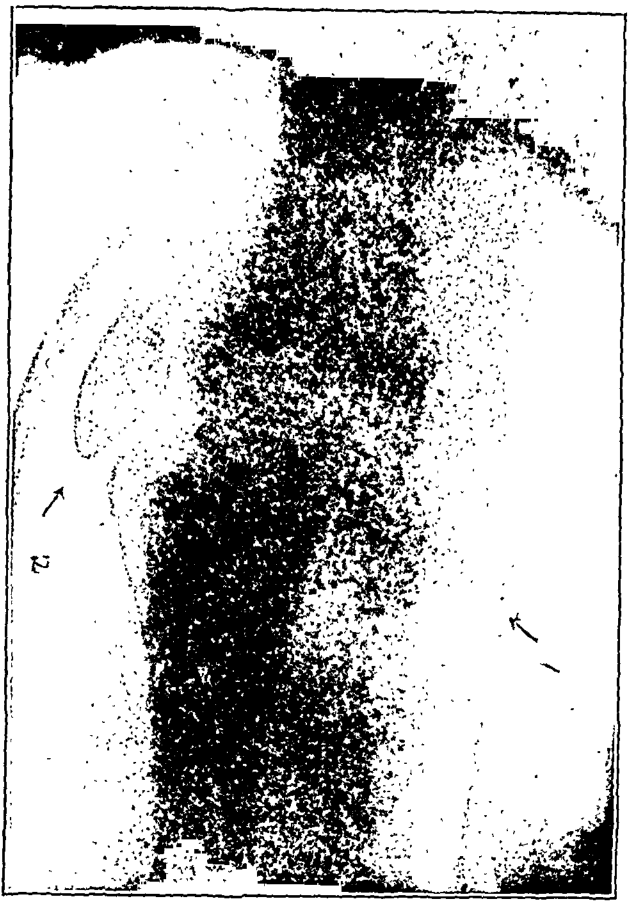

Fig. 5.—Fracture and partial dislocation of left elbow (Case 3). Arrow 1 points to detached external condyle and Arrow 2 to internal condyle. Arm is still in splints after a labored effort by two good physicians to adjust break without operation. This adjustment is probably as good as it could be without an open operation.

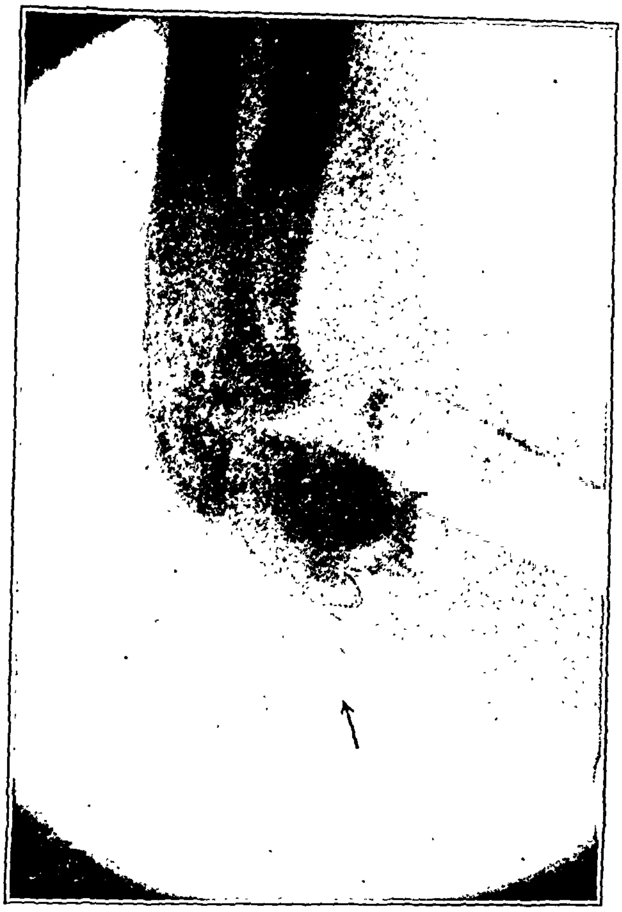

Fig. 6.—Lateral view of same fracture (Case 3) of both condyles before wiring, upper fragment protruding through skin. The outlines of the bones have been reenforced in this set of radiographs also.

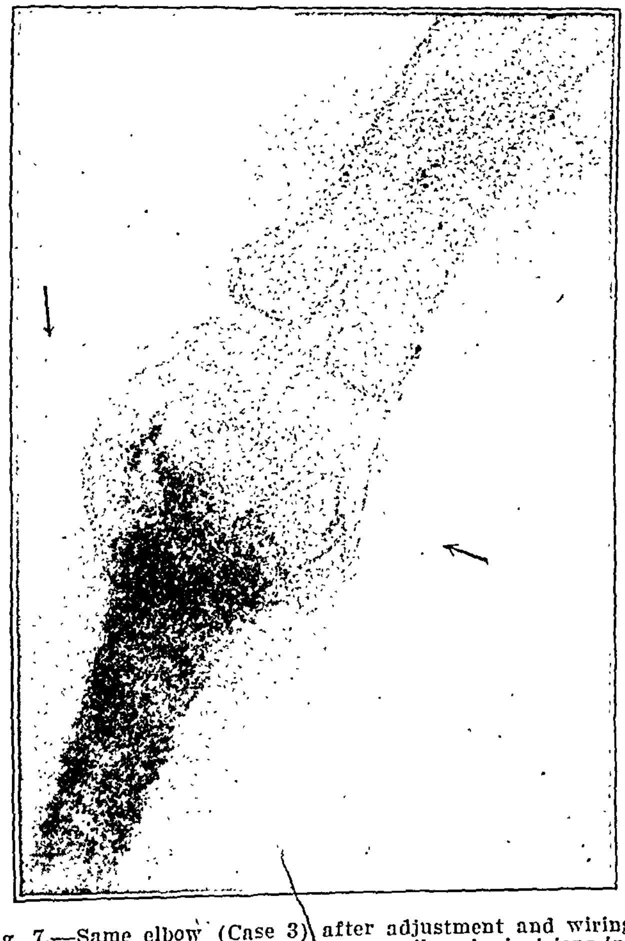

Fig. 7.—Same elbow (Case 3) after adjustment and wiring condyles in place. It was necessary to open elbow by incisions in three places and tissues were elevated so we could see clear through arm in front of bones. One incision was made where bone had penetrated through skin.

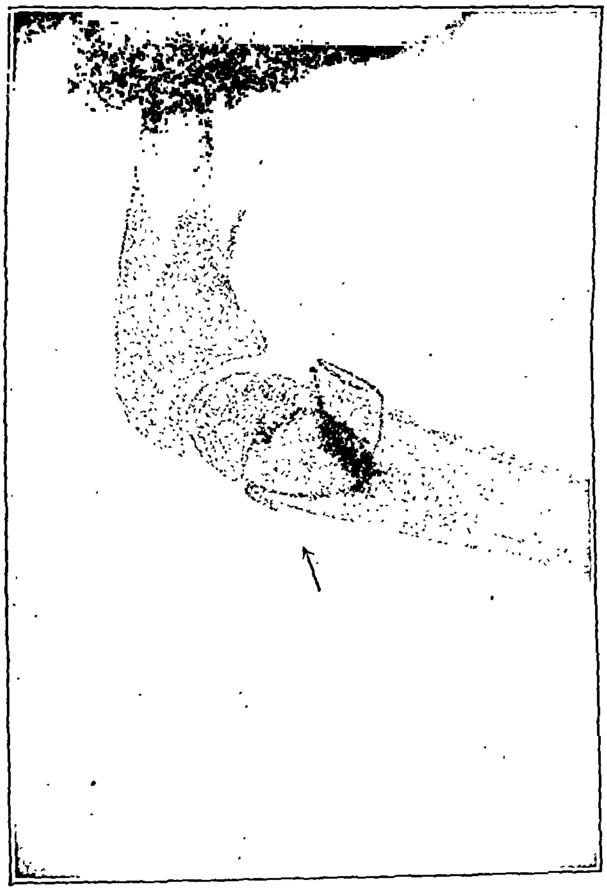

Fig. 8.—Lateral view of same fracture (Case 3) after wiring. Elbow was put in splints and kept quiet for six weeks, no passive motion being permitted until inflammation had entirely subsided. Four months after injury boy has full use of arm.

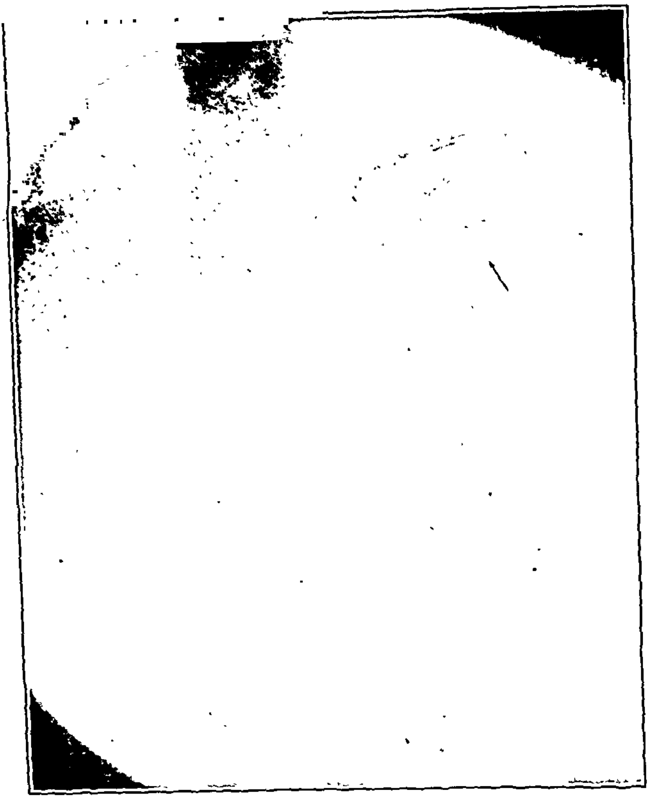

Fig. 9.—A girl, 8 years old (Case 4), swallowed a fence staple. A skiagraph (not reproduced here), taken three hours afterward, showed the staple being churned about in the stomach. This shows the staple about to leave the stomach. Here the staple made a half turn while being radiographed and we have a double view of it. In this set of pictures the outlines of the staple and some of the bones have been reenforced.

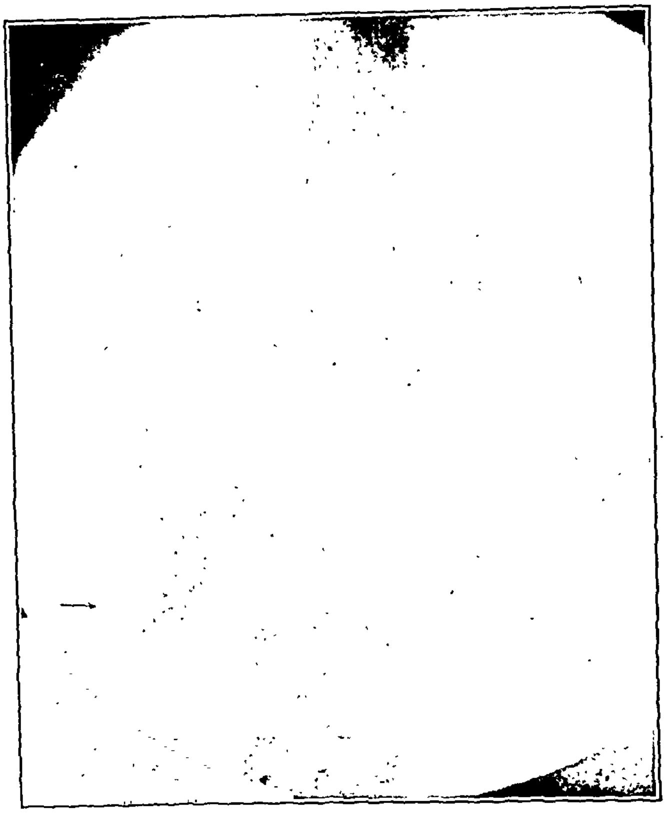

Fig. 10.—This shows the staple traversing the descending duodenum on the opposite side of spine from Figure 9 and down below last floating rib. The staple was not aided in its progress by any form of treatment. Here we also get a partial double view on account of the peristaltic action of the bowel.

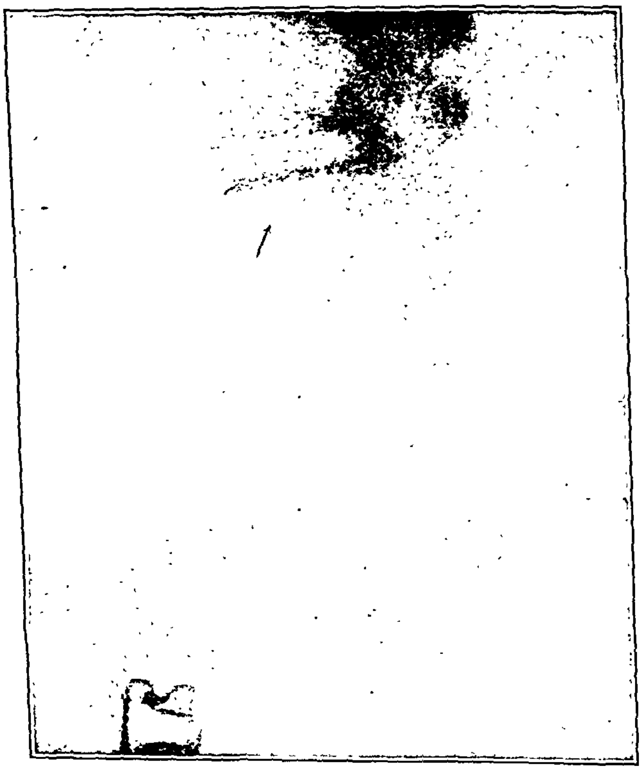

Fig. 11.—Staple in ascending duodenum about the duodenojejunal juncture; it has almost completed a circle; this is also a double view. Figures 9, 10 and 11 were all taken during the same hour, showing the speed with which such things travel. The staple then had traveled from the upper right-hand corner to the jejunum in one hour's time, or in four hours after being swallowed.

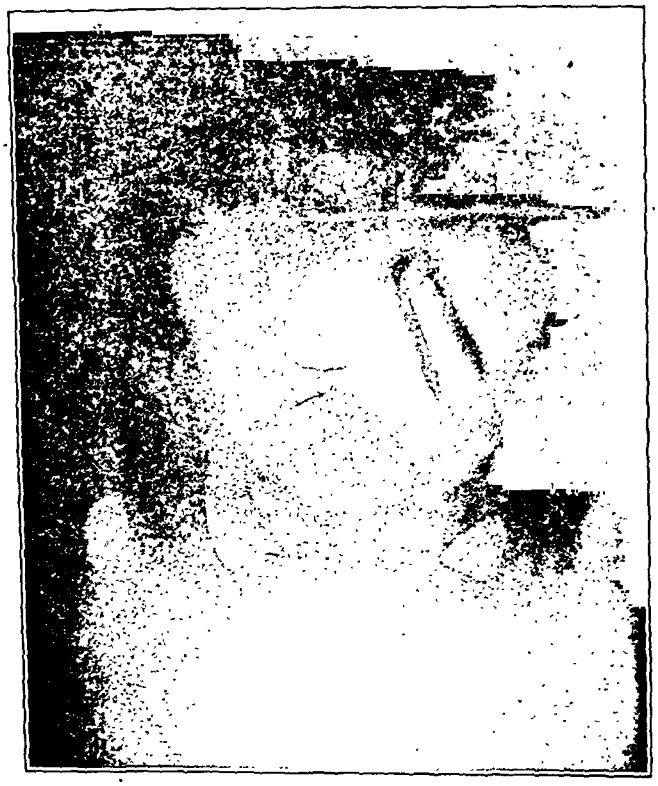

Fig. 12.—This was taken thirty-six hours after Figures 9, 10 and 11, and shows the staple to better advantage, evidently because it was more stationary. No treatment was given the child except an enema, thirty-nine hours after the staple was swallowed, when the staple was washed away. This plate was exposed to the *x*-ray nine seconds. It appears as though the staple had turned around in the large bowel, but it was evidently proceeding arch first and was about to make the loop of the sigmoid.

An agent for one of our large *x*-ray houses recently said that certain physicians had told him that "the *x*-ray was a thing of the past and it would soon be done away with." Such conclusions can be due only to one of two causes: either these physicians have fumbled their own *x*-ray work or some one else has fumbled it for them.

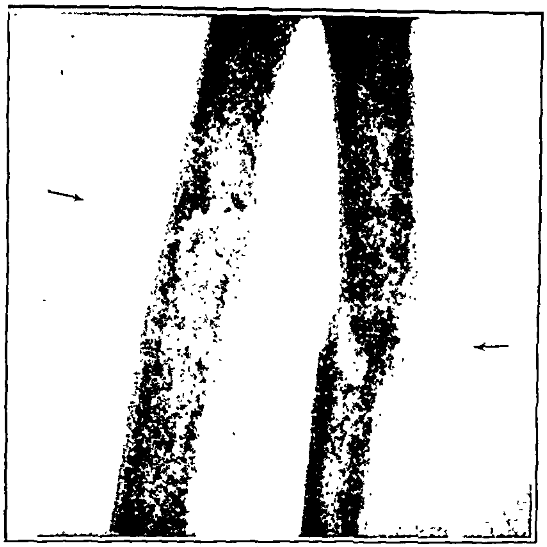

Fig. 13.—Fracture of both bones of forearm (Case 4). Here we have quite clearly demonstrated a condition in fractures of two bones parallel to each other in which it seems almost impossible to secure a perfect coaptation without an operation, because when one bone is perfect the other is out of adjustment, and if the second bone is perfect the other is out.

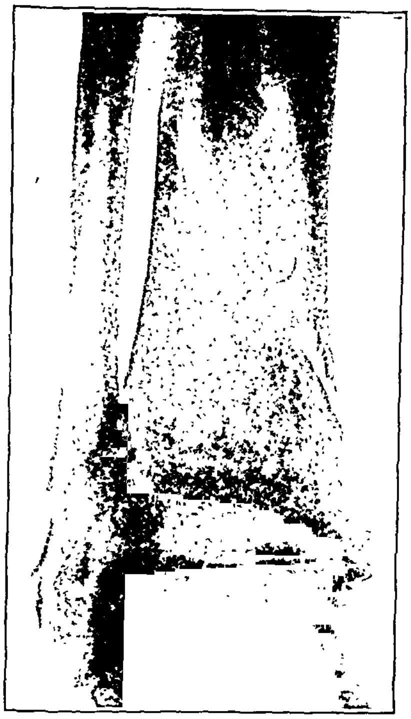

Fig. 14.—Simple fracture of lower third of right tibia (Case 5), which at first glance appears to be a comminuted fracture. The diamond-shaped piece of bone in reality is a part of the main bone, the white mark all around it being caused by the peculiarity of the break.

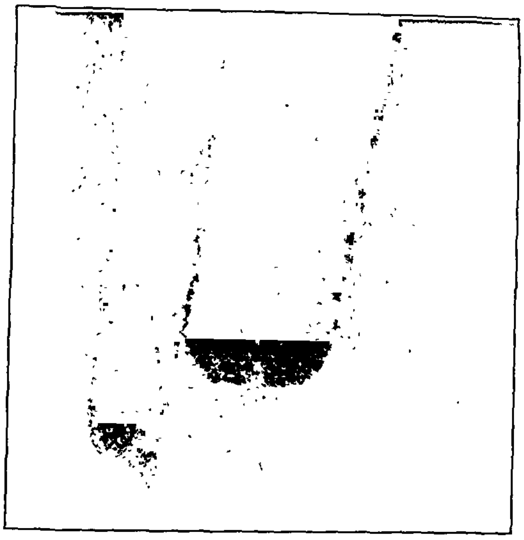

Fig. 16.—Amputated leg (Case 7), fibula being left half an inch longer than tibia with an additional spicula projecting one-fourth inch further. This leg gave trouble until reamputated and bones made even, which shows the importance of making bones even. If either bone is to be left long it should be the tibia, because it is the larger and the bone that bears the weight of the body, the fibula being only a brace.

Some one has well said: "To read the report of finding a renal calculus, a tuberculous hip or a frontal sinus disease is one thing; to realize the long road of failure and discouragement which the writer traveled to reach that end is quite another." The man who sells you the machine tells you that it will take any old thing at any old time; he puts it in and shows you how it is done; after he is gone your troubles just begin. When you have spoilt about two or three hundred plates and punctured half a dozen tubes you begin to realize how little you really did know about the business in the beginning. I spent six years trying to take a picture of a hip-joint before I succeeded in getting one that I would dare exhibit without an apology. Some one has said that "not failure, but low aim, is crime."

The *x*-ray is no longer *estopped* by the query whether these things can be taken; it is now only how well they can be taken; that is, radiography is a highly developed art.

Much of our work previous to the *x*-ray was problematical. A fracture would be adjusted so that the part looked all right to the naked eye and allowed to go at that, but to-day it is different. After the fracture is adjusted an *x*-ray is taken, and if the bones are improperly adjusted the fracture is treated accordingly. Time was when a surgeon might say that an injury to a joint was a simple sprain and stick to his opinion without fear of contradiction, but to-day he may be forced to change his opinion when confronted by the *x*-ray findings. It is surely a great source of satisfaction to be in practice in the present age as compared with the many uncertainties which existed in the practice, say twenty years ago.

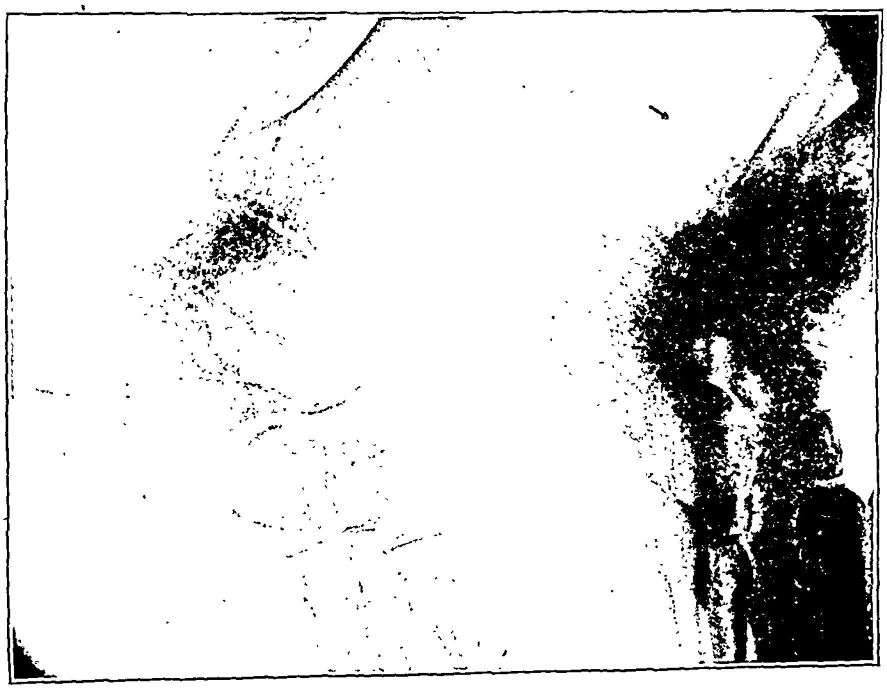

Fig. 15.—Normal ankle on left and sprained ankle (Case 6) on right with particles of tibia broken off. Such injuries tell the reason why some sprained ankles do not recover rapidly, there being a fracture in addition to the sprain. These breaks are always overlooked without the aid of an *x*-ray. The two views demonstrate how it is possible to develop a negative so that all the soft tissues and even the tendons disappear, the single foot view showing a shadow of the tendo Achillis. The outlines of the particles of broken tibia on the right have been strengthened for fear they would not otherwise show in the reproduction.

In fractures the *x*-ray shows us, many times, a very imperfect adjustment of the bones in what had seemed a perfect adjustment when examined without the aid of the *x*-ray. Frequently amputations refuse to heal and it is not always possible for one to say why, without the aid of an *x*-ray. A small piece of bone may have been left in rounding off the edges of the bone; or it may be found that the bone was left long when it should have been short. The case shown in the collection here (Figure 16) is a very good illustration of how this happens. Here the surgeon, no doubt, thought that the bones were even; but instead the fibula is half an inch longer than the tibia with a sprig of bone extending down fully half an inch further; this constantly gave trouble until removed. A condition like this may be ascertained without the *x*-ray in a thin subject, but in the average individual it would be rather difficult, previous to operation.

The course of the ureters can be outlined when they contain metal catheters; the stomach can be clearly outlined when injected with bismuth and the work on the thoracic cavity, so beautifully worked out by Beck, makes the knowledge we may obtain with the *x*-ray very extensive. The aid which the *x*-ray bears to a correct diagnosis (within its limits of course) cannot be underestimated. Many of these points, thus hastily referred to, are illustrated by the accompanying radiographs and case reports.

The *x*-ray, when in good working order, is one of the most valued adjuncts to good surgical work we have at our command. It helps to make surgery a more exact science. It gives us a much clearer understanding of our cases and will, eventually, lessen to a great extent the vast number of cripples that were unavoidable previous to the time of the *x*-ray.

A CERTAIN AND SIMPLE METHOD OF OBTAINING THE KNEE-JERK

CURRAN POPE, M.D.
LOUISVILLE, KY.

In the study and investigation of neurologic cases, I am constrained to believe that the knee-jerk or patellar tendon reflex, correctly obtained, is one of the most important tests, if not the most important, in a great variety of cases. It is certainly a test that the general practitioner should more frequently make in the ordinary routine examinations of his practice. Perhaps not everyone is aware that the knee-jerk is often present, but inhibited by the patient, and that any method that will insure a correct response is well worth consideration. I have found it practically impossible for a patient to inhibit the knee-jerk if the method here described is employed. It was in an endeavor to prevent this frequent occurrence that the following plan was evolved.

The patient, male or female, should sit in an ordinary straight-backed office chair, relaxing the entire body as far as possible. The feet are then pushed forward so as to extend the lower limbs comfortably. This position produces complete relaxation of the flexor groups of muscles of the lower limbs, and, as it is these groups of muscles that inhibit the response, it seems rational to believe that the inhibition would be prevented.

With the limbs in the position indicated, and with the ends of the toes of both shoes on a line, the clothing is drawn reasonably snug over the patella with the thumb and forefinger of the left hand in right-handed individuals. The three remaining fingers and the palm of the hand should rest on the thigh just above the patella. With a percussion hammer a gentle tap is given the tendon and its response or the absence thereof can be both seen and felt, for the palm and three fingers of the left hand will give an excellent index of the prominence and activity of the response.

In this position, reinforcement is most satisfactorily performed, and a wider range of action obtained.

I have been unable to find a description of this method and, therefore, believe it to be original. It has stood me in good stead in some cases in which it was very important to know the presence or absence of this reflex.

115 West Chestnut Street.

A DRUM-SPINNING ATTACHMENT FOR AN ORDINARY KYMOGRAPHION

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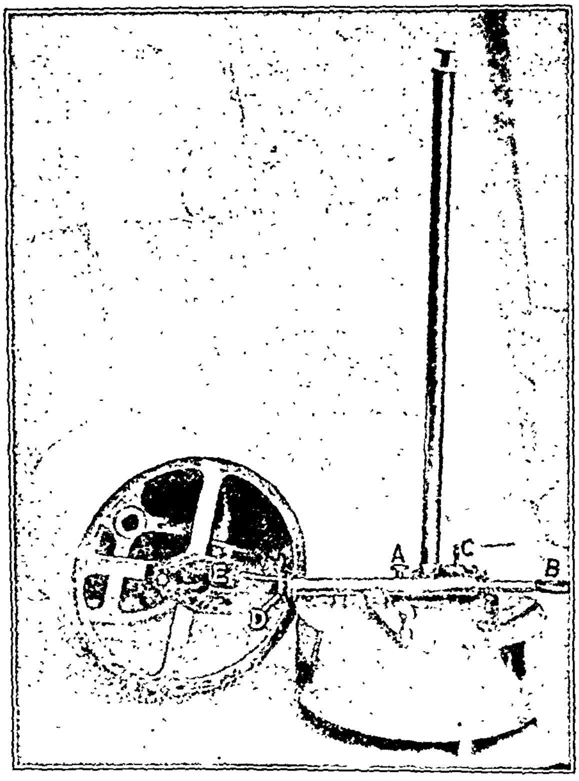
ST. LOUIS

This attachment can be fastened to the base of a Harvard Apparatus Company's kymographion by means of a single thumb screw, as shown at *A* in the illustration. The device is "set" by pulling out the plunger by means of the ring *B*. When the knob *C* is pulled the drum will be spun around rapidly for one revolution and then stopped in exactly the same position as that from which it started. The writing-points of all muscle levers, tuning-fork, etc., remain constantly on the even surface of the drum paper. The plunger can be at once "set" and the drum spun again as many times as desired, thus allowing superimposed curves to be taken on the same base line. A set-screw *D* can be adjusted to regulate the speed at which the drum spins. A special clamp *E* fastened to the lower part of the drum permits it to be firmly clamped on to the drum spindle. With slight variations in regard to the attachment this device may be used on any ordinary kymographion. It is generally desirable to fasten the kymograph down to the table by means of a small hand clamp.



Drum-spinning attachment for an ordinary kymographion.

This spinning device was made for me by Mr. Paul Bauer, mechanician for the Washington University Medical School. It answers the same purpose as the pendulum, or spring myograph, with the added advantages that it is smaller, cheaper, and much more easily and conveniently manipulated by students.

THE X-RAY TREATMENT OF RINGWORM OF THE SCALP

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Physician to the New York Skin and Cancer Hospital, Consulting Dermatologist to the Randall Island Hospitals, Consulting Physician to the New York Hospital
NEW YORK CITY

Although I have not heretofore attained all the success which could be desired with the *x*-ray treatment of ringworm of the scalp, I was so profoundly impressed with the results observed during a recent trip to London and Paris, that I do not hesitate to urge this plan of treatment when it can be properly carried out. As is the case, however, in many matters in medical and surgical practice, the personal equation and the experience of the operator are great factors in success in the employment of the *x*-rays; but with sufficient care and vigilance, dexterity can be secured by many in the use of this remedy, and the best results obtained.

Ringworm of the scalp is often regarded too lightly. While certain recent cases may yield readily to various forms of treatment, and while the disease tends to pass away at puberty, no one who has had much to do with ringworm of the scalp among poor children or in public institutions will underestimate its seriousness, or scorn any measure which offers a prospect of a speedy cure of this rebellious affection. In New York City, children with ringworm are very properly excluded from the public schools. When it gains a foothold in asylums it becomes a veritable nuisance and even a scourge, involving great care and expense in the segregation and treatment of those afflicted; of this I have had personal experience on many occasions. In some of the city institutions it has been very prevalent at times, and in the hospital on Randall's Island there are always many hundred children with ringworm, some of whom remain months, and even years uncured, in spite of intelligent medical treatment and faithful nursing.

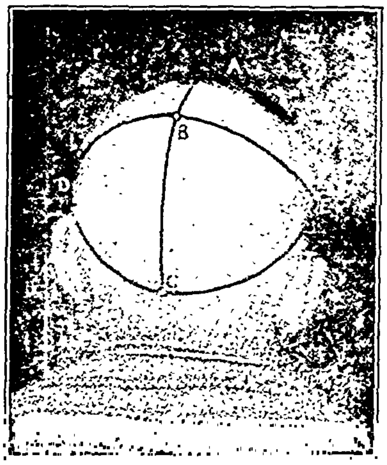

Fig. 1.—Child prepared for *x*-ray applications to whole scalp. The applications are made at right angles to the points A (toward the forehead), B, C, D and E.

In Paris, some time ago, ringworm became so prevalent that there was established in the Hôpital St. Louis a special school, with instructors, where several hundred children were kept under treatment, as it was found impossible to check the disease by out-patient management. It was here that Sabouraud made his remarkable studies, which have thrown so much light on the subject, and here that he developed and systematized the treatment now under consideration. The result of this has been that, whereas there were at one time large numbers of children under his care, about 300, I understood that, when I was visiting the school recently to study the process of cure, there were only about fifty in the school. The numbers of affected children have steadily diminished, and the disease is largely stamped out in Paris by means of *x*-ray treatment, some thousands having been thus treated.

In London, ringworm became so prevalent and obnoxious that the Metropolitan Asylums Board created what is known as the "Downs School," in the country at Sutton, in Surrey, about fifteen miles distant from London, where children affected with ringworm were sent from the various public institutions under its charge. From the first, it was placed under the medical care of Dr. Colcott Fox, of London, who gives all day Saturday to the work, and through whose courtesy I was enabled to spend considerable time there, examining the children and watching the method of treatment. The direct *x*-ray applications were given by Dr. H. O. Adamson, who has done much to make this mode of treatment effective; he also spends all Saturday there, and another man does *x*-ray work on two other days of the week, all with skilled nurses.

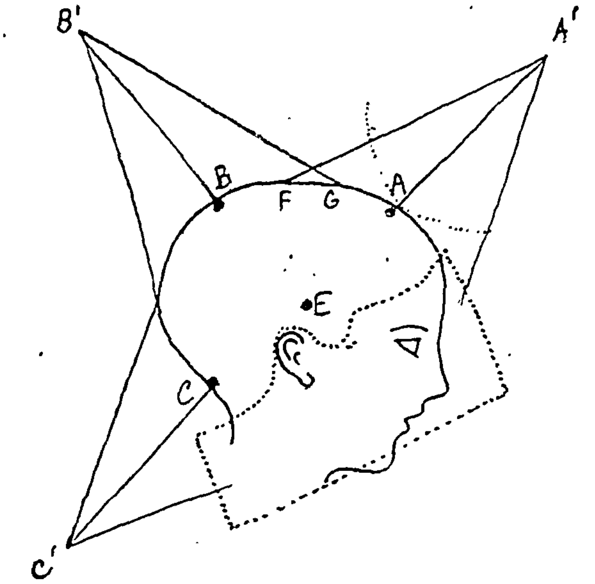

Fig. 2.—Points A, B, C and E receive each a full pastil dose. A' F, B G *indicate* the angle at which rays from A' and B' fall on scalp, and the distance from the source of the rays as compared with the normal distance A' A and B' B. The dotted line represents the sheet of lead used to protect the ear and face when point E is *x*-rayed.

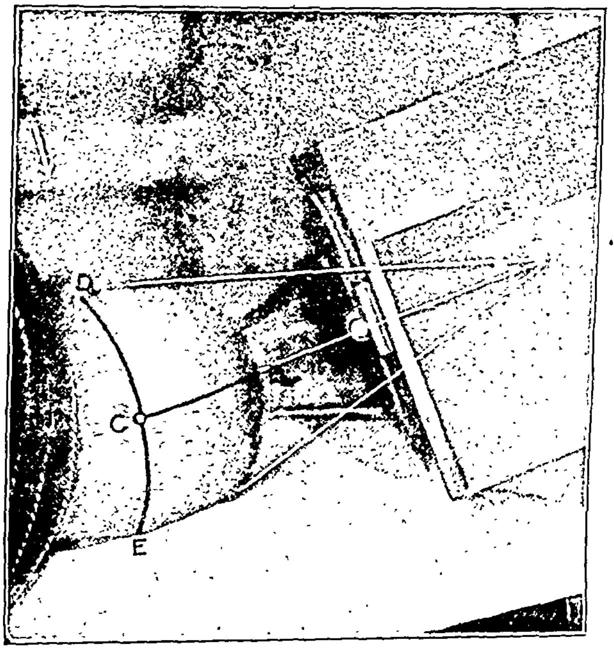

Fig. 3.—Box-shield in position for *x*-ray application to upper occiput (B). The white lines indicate the direction of the rays through the aperture in the box. The white arrow indicates the direction in which the dose is to be aimed when the left side of the scalp is being rayed. The ear and side of the face is then covered by lead-foil as in the diagram (Fig. 1). Similarly when C is rayed the neck and back are protected. (The pegs here shown were found to be somewhat too thick and have since been made more slender.)

The institution consists of six dormitory buildings, holding seventy patients each, with other buildings for administration, schools, laundry, electric plant, etc. The dormitories have been full much of the time, with over 400 children, but of late they are less crowded, as the disease seems to be well under control. Several thousand children have been treated and cured there, almost 1,000 in 1909, and 598 up to July 16, 1910. On July 9 forty-five were admitted and thirty-one discharged, and thirty-two were discharged on July 16, admission being only every two weeks. The children stayed in the schools about three months each, and were then returned to the institutions from which they came. As they were all under the continual care of the Metropolitan Asylums' Board, in other institutions, they were under constant observation, and the authorities were in a position to know if there was any return of the disease. I was, therefore, greatly interested to learn that it was the rarest thing to have a child sent back for treatment, and my inspection of the books showed that this very seldom occurred.

The same treatment for ringworm of the scalp has also been carried out on a large scale by Dr. J. H. Sequeira, in the out-patient department of the London Hospital, where there is a most elaborate and excellent *x*-ray outfit, at one time thirteen nurses being employed. There had been about 2,000 ringworm cases treated since July, 1906, and 580 during the half year ended July 1, 1910.

A very intelligent nurse brought some new patients while I was there; I asked her how many children she had brought from her institution, and she replied "about 200." I then asked her how many she had brought back uncured, and she said, not over two or three of the entire number.

There have been also reports from others who have made extensive and successful use of this method of treatment. My personal observation was quite enough to satisfy me that we have in this method the means of controlling a disease which has hitherto been the source of vast annoyance to physicians and managers of many public institutions.

When the claim was first made in the medical journals that obstinate ringworm could be cured with a single application of the *x*-ray I was incredulous, and although treatment by the *x*-ray has been used for some years in the New York Skin and Cancer Hospital, I have to admit that I do not know of any cases which have been cured by a single exposure; and I now believe that the fault has been in the technic of the operation, for the testimony obtained in Paris and London was that this was almost invariably the case.

It is not necessary here to make any extended remarks on the different forms of ringworm of the scalp, or on the diagnosis, which can be so easily established by the microscope, but only to state that all forms of the disease, and also favus,[1] seemed to yield to the right administration of the *x*-rays. The secret of success lies in securing a proper strength and duration of exposure which shall effect complete depilation of the hair, no more and no less; and this is secured by means of a radiometer, the most practical of which is that known as the "pastil of Sabouraud." These pastils consist of small discs of cardboard, coated with a yellow preparation containing platino-cyanid of barium; they are exposed to the *x*-rays during the treatment until they change to a pale green color, corresponding exactly to a test scale accompanying them.

There are, of course, many elements to consider in connection with the operation of the *x*-ray which this is not the place to discuss; suffice it to say that no one should attempt the treatment here described without a good working knowledge of this powerful agent. It is to be remembered that the effects of the ray will vary with: (1) the intensity of the rays produced; (2) the distance of the anticathode, or target, from the treated part; and (3) the duration of the exposure. The intensity of the rays may vary in the same apparatus from day to day or even in the course of the same day, with the high or low tension in the tube, with the temperature, state of the barometer, action of the coil or static machine, thickness of the glass of different tubes, condition of the conductors, etc., so that a time exposure, as practiced by many, may be a very uncertain guide; unless, therefore, there is some efficient radiometer to measure accurately the amount of rays used, there is great danger of overdoing or underdoing the work, as will be mentioned later. This, however, can be accurately determined and regulated by the pastil of Sabouraud.

The distance from the anticathode, or target, is fixed by Fox by means of three light wooden pegs, about 3 inches long, protruding from the tube-holder, which rest on the affected part; Sabouraud adheres to tubes made of metal or lead glass of various sizes, the ends of which rest on the scalp. Sabouraud makes the distance 15 cm. or 6 inches, and Fox 17.5 cm. or 7 inches.

Having, thus, the distance a fixed element, and the matter of the intensity of the application determined definitely by the change in color of the pastil, the duration of the exposure becomes a negligible quantity, provided that the pastil reaction is accurately attended to; but Fox has also clocks, one for each of three patients treated at the same time, which are set at the beginning of each exposure, so that after a certain number of minutes the pastil is removed and frequently examined, in comparison with the standard color to which it is to be changed.

The pastil is inserted at exactly one-half the distance from the anticathode to the scalp, 7.5 cm. or 3 inches from the former by Sabouraud, and 3½ inches by Fox. In the apparatus employed by Sabouraud, the pastil is made to adhere to the plate holding the metal or glass cylinder for localizing the *x*-rays, which thus has to be wholly removed each time it is inspected. In the apparatus used by Fox, the pastil is applied on the end of a plug which is inserted in the proper position, and so can be removed much more easily, without disturbing the apparatus.

The time occupied by an exposure necessary to change the pastil correctly, as practiced by Fox and Adamson, (from 20 to 30 minutes) surprised me, for it was more than I had been accustomed to allow in such cases. Sabouraud states that by using very hard tubes he had been able to reduce the exposure to about six or seven minutes for each sitting, but he had arranged matters so that the usual sittings last from ten to fifteen minutes, according to external conditions of the atmosphere, the tubes, etc.[2] All of them use quite a small tube made by Drisler, which has a wonderful endurance; running eight hours daily they will often last for from two to six months. Sabouraud used a static machine until recently, when he introduced a coil; he now employs both; both Fox and Sequeira use coils.

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[1] At the meeting of the British Medical Association in London, in July, 1910, Dr. Dally reported in regard to the treatment of favus at the special school established by the London County Council for these cases in Frick Street. One hundred and fifty children had been admitted, eighty-two of whom were treated with the *x*-ray with one single application, the entire scalp being covered in five exposures by the method advocated by Adamson. The treatment was perfectly successful.

[2] Brit. Jour. Derm., 1906, xviii, 207.

I could not learn just how it was that the time of exposure by Fox was so much longer than the exposure by Sabouraud, but it had to do, of course, with the apparatus employed. The experience of all the workers was, however, that the pastil (when it was genuine and correctly employed) was to be relied on, and represented the dosage of x-rays which the average skin will stand, whereas less than the measure of a pastil dose was insufficient to produce complete depilation, and would not effect a cure. They told me that they did not recognize idiosyncrasies as to the effect of the x-ray on different skins, and did not find it necessary to vary the dosage for different patients. Adamson[3] says, however, that some pastils are more sensitive than others, and recommends only those obtained from the original makers (Drault, of Paris) and then only with the "B tint" which accompanies the book of them, since the "B tint" was apparently not a fixed standard, but was adjusted to each series of pastils.

For the proper employment of this treatment it is necessary that the hair should be cut very short with a clipper, and it is commonly wise thus to clear off the entire scalp in order also to detect small incipient patches, which might be overlooked and so protract the cure. When there are but few patches these can be treated by isolating them with localizing tubes of proper size, or lead shields, but when there are more than five scattered patches the rule is to depilate the scalp completely by means of the x-rays. Sabouraud accomplishes this in ten or twelve exposures, covering each circle that has been treated with a disc of lead foil, so that the rays shall not touch it again.

Adamson[4] has presented a simplified method of depilating the entire scalp with five exposures, which I observed to work so perfectly that I shall describe it as briefly as possible, presenting his illustrations, with his kind permission. The object of the method is to make applications of the x-rays at five different points of the scalp, in such a manner that while the areas of exposure encroach on each other, the rays fall at such an oblique angle that there is no injurious effect from overlapping, but each and every portion of the scalp receives the full pastil dose of x-rays; so that the areas which have been treated are not covered with lead foil, as by Sabouraud.

The location of the several applications is shown in the accompanying illustrations. The hair being clipped short over the whole head, five points are marked on the scalp with a blue skin-pencil: A, in the center line, from 1½ to 2 inches within the frontal margin of the hairy scalp; B, near the center of the crown, five inches back of A; and C, just above the lower border of the hairy scalp, which should also be 5 inches from B; at the sides of the scalp D just above and in front of the left ear, and E just above and in front of the right ear. These points should also be 5 inches from the center line. The points are then connected with lines made by a blue pencil, which should meet each other at right angles (Fig. 1).

A Sabouraud pastil dose is given over each of these points A, B, C, D and E in succession, beginning with B, in such a manner that the point is the center of each area rayed, and the anticathode at a distance of 6 inches is vertically over the point, and so at right angles to each of the other applications (Fig. 2); the forehead, nape of the neck, the ears and side of the face must be protected with lead or rubber when exposed to the rays. Most of the applications are made with the patient lying down (Fig. 3). The aperture in the box through which the rays pass is 3 inches in diameter, and 3¼ inches from the anticathode, so that the rays diverge, at the head, to a circle 6 inches in diameter. Care must be taken in applying the rays at A, E, C and D to have the center of the area over the point indicated, so that about half the dose goes on the scalp, and much of it on the shield protecting the face, ears and neck, otherwise there will be an overexposure somewhere.

When Adamson's account appeared nearly two years ago, he had used this method in seventy-five cases with perfect results; as I observed its workings it was excellent. Since that time he must have treated hundreds of other cases in this way, for a large share of the children in the Downs School had the entire scalp depilated for extensive ringworm by this method.

The effects of the application of x-rays in these cases are very interesting. There are, of course, no visible results from the exposure at once; at the end of about seven days there may be a slight erythema, but generally not, and nothing occurs until about two weeks after the operation, when the hairs begin to fall with the slightest traction, and within a week later the process is in full operation. By the end of a month from the time of exposure, the scalp is pretty well bared; the roots of the hairs are found to be atrophic and their points sharpened. The hairs affected by the trichophyton are the last to fall, and must be removed by daily washing with soap. Fox washes the head every day, from the beginning, and keeps the scalp lightly anointed with a carbolized petrolatum, which prevents the affected hairs from carrying the disease. Sabouraud treats the scalp from the first day of the operation to the end, with a daily application of a weak tincture of iodin: tincture of iodin (freshly prepared) 1 part, alcohol 9 parts.

The diseased patch, or the whole scalp when treated, remains bald for a month or two, when it becomes covered with fresh hair (lanugo), and within from three to four months, if the process has been properly carried out, the hair will have regrown well, with no trace of the parasitic disease.

In the Downs School, where I had the opportunity of observing large numbers of children at various periods after the single application of the x-rays, it was possible to verify the facts above stated to a nicety. The children were returned to their various institutions when the hair was partly regrown, and when Dr. Fox, who examined each child minutely, was satisfied that there were no remains of the parasite on the originally diseased patches. This generally occurred at about the end of three months from entrance, and as already stated, thirty-one children were discharged one Saturday, and thirty-two a week later. Ordinarily, it is better to determine the cure by accurate microscopic examination of the débris scraped from the site of the patches, after being soaked with equal parts of liquor potassæ and glycerin, but with Dr. Fox this had become unnecessary, and, as stated, the results proved the correctness of his judgment and sufficiency of the treatment. As already mentioned it was the rarest thing to have a child readmitted, although being still in various institutions very great care was naturally exercised against recurrence.

A few points remain yet to be considered. It is possible that in certain cases the x-ray may not have been given to the full pastil dose, from error in judgment of

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3. Brit. Jour. Derm., 1906, xviii, 183.
4. Lancet, May 16, 1909

the operator as to the change in color of the pastil, and depilation may not be complete in the affected patches. This cannot be determined at once, and only after the expiration of at least a month should a second application of the *x*-ray be made; this necessity, however, seldom occurs in skilful and experienced hands. Then, again, if the proper dose of *x*-rays, as regulated by the pastil, has been much exceeded, one of two untoward results may follow: (1) there may be a burn, of more or less severity; or (2), permanent alopecia may result. Fortunately, the former rarely if ever happens now, except with very unskilful handling of the rays, and occurrence of alopecia is also very exceptional. I was told that permanent baldness had happened a few times in the very earlier trials of this method in London, but not in later years. I know of one case in New York in which the hair did not come back over a localized area, but this was from repeated use of the rays in unskilful hands. If the hair does not grow within six months the alopecia will be permanent.

Some question has arisen in regard to the possible effect of *x*-rays on the structure or functions of the brain, and this was the subject of a special discussion at a joint meeting of the dermatologic and electrotherapeutic sections of the British Medical Association;[5] the conclusion was unanimously reached that in the many thousands of cases in which the *x*-ray method had been practiced this had not occurred, and that "they might regard the specter of brain trouble as abolished." There was not even headache after the prolonged and repeated exposure to the *x*-rays in operating on the entire scalp, though some think it not desirable to employ this treatment in children under the age of 3 years.

As for the mode in which proper *x*-ray treatment cures ringworm of the scalp, all are agreed that it does this solely by effecting a complete depilation, and that the parasites are in nowise killed by the *x*-ray, in the doses used. The trichophytic hairs are liable to spread the disease, but the contagiousness of the patient ceases when they have all fallen, a month or so after the exposure to the *x*-rays.

Sabouraud[6] makes some interesting remarks concerning the gain, financial and other, which has been accomplished by the perfecting of this method of treatment of ringworm of the scalp. In these he shows that whereas before 1904 there were 300 beds in the Ecole Lallier, at the Hôpital St. Louis, occupied by these patients, whose stay averaged over two years each, he has reduced the number to 100, and the average time for a cure to a little over three months; and whereas, in 1903 there were 110 discharged cured, he now discharges more than 500 annually. The cost of each child for a cure was originally about 2,000 francs, whereas now it is but 260 francs, effecting a saving of between 300,000 and 400,000 francs annually to the government.

In conclusion, I am well aware that much that I have written is well known to many, and that the value of the *x*-ray treatment of ringworm of the scalp is accepted by most if not all dermatologists, but I cannot help feeling that this really great advance in dermatology is not thoroughly appreciated by the profession, and that the technic is not so understood that the best results are commonly obtained. Undoubtedly in recent cases good results can often be secured by the older, well-known remedies, but long experience in public practice and institutions convinces me that there are multitudes of cases in which the disease remains uncured for very long periods, being held partially in check by treatment of various kinds. From what I saw in Paris and London I know that the treatment here described is thoroughly effective.

It is recognized that there are objections to the treatment, in regard to the perfect baldness of patches or of the entire scalp, which must be endured for six weeks or so; but certainly the prospect of a cure in three months, instead of over two years on an average (as under the skilful treatment in the Hôpital St. Louis in Paris, prior to 1904), warrants endurance of this relatively trifling annoyance. Sabouraud,[7] after studying the disease microscopically for many years, wrote in 1896: "Not only is there no curative treatment known for tinea tonsurans, but I believe I am authorized in saying that no antiseptic treatment whatever will be found in the future capable of accomplishing this end. For even if we vary the chemical nature of the antiseptics, that would hardly change their power of penetration, whether solid, liquid, or gaseous they would always meet the same obstacle, that they could not penetrate deep enough. The root of the hair is inaccessible to external antiseptics."

It was this conclusion which led him to experiment with various methods of depilation (for the hair cannot be epilated mechanically, as it breaks off), and as a final result we have the method now described which has given such brilliant success in thousands of cases, at the hands of many careful observers who vouch for the results.

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THE PRESENT STATUS OF THERAPEUTICS AND THE SIGNIFICANCE OF SALVARSAN *

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The value of salvarsan is being discussed at present almost exclusively by syphilographers and simply as a new remedy for syphilis. From this point of view the verdict as to its importance will depend on its efficiency as a therapeutic agent compared with that of mercury, whether it is more efficient or at least as good as that old specific remedy. General medicine, however, offers another point of vantage. Salvarsan is not simply an additional remedy for syphilis; it marks an epoch in medicine. This, I believe, will remain true, even if it be finally established that for syphilis this new remedy falls short of the old ones. Salvarsan presents a new departure and a new principle in therapeutics. It is from this point of view that I wish to make my remarks on the therapeutics of salvarsan. In order to elucidate my position, however, permit me to present in the first place a brief outline of the rapid fall and the slow rise of therapeutics during the course of the new medical era; this will assist us at the same time in the understanding of the present status of therapeutics.

For many hundreds of years practitioners of medicine lived in the bliss of ignorance; they were sure that they cured diseases—that the recovery of a patient was due to the drug which they administered. With the dawn of the new era in medicine, some seventy or eighty years ago, there came a sudden awakening—at least for a good many: the confidence in the action of drugs and therapeutic measures was shaken to its foundation. One of the most potent factors in this upheaval was the success of homeopathy: if patients can get well, it was argued, with such infinitesimal doses of drugs, they probably do get well without the assistance of any drugs and sometimes perhaps even in spite of the drugs. A remarkable situation now arose. While it is as clear as day that the practice of medicine has a right of existence only by the help which it can render to the sick, medicine of that day decided to go ahead without therapeutics. Pathologists began to establish anatomic changes corresponding to every disease, and clinicians diligently and conscientiously studied the symptoms of diseases by which these changes could be recognized during life. The interest of clinicians began to center preferably in such diseases as would lead to a confirmation of the diagnosis by a post-mortem finding. Thus the subject of therapeutics was relegated completely to the rear, and for a long period no man of standing in the science of medicine devoted his time to the study and furtherance of this most necessary branch in medicine. We know the anatomic changes which take place in diseases, said the celebrated Skoda; we can diagnose diseases, but we cannot cure them. We all know that even in our day we have not a few who still profess the same dangerous fatalistic doctrine.

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[5] Brit. Jour. Derm., 1909, xxi, 394.

[6] Sabouraud: Les Teignes, Paris, 1910, p. 804.

[7] Sabouraud, Les Teignes, Paris, 1910, p. 770.

* Read at the opening of the symposium on salvarsan at the annual meeting of the New York State Medical Society, April 18, 1911.

Permit me to say here in parenthesis that the intimate coalition of pathologic anatomy with clinical medicine led to another serious result: the identification of the pathologic changes after death with the preceding disease. This, too, is a misleading and dangerous conception. The pathologic state after death is only a consequence of the disease and not the disease itself. Disease in most cases is not a state, but a process, a functional disturbance which may lead to permanent anatomic changes, if not intercepted in time. I say it here because it cannot be said often enough, and because of the fact that functional disturbances are more readily amenable to corrections than permanent anatomic changes.

After a period of complete therapeutic nihilism the practice of medicine gradually began to recover from its shock. We need not dwell here on the development of surgical therapeutics, which was rather stimulated than hampered by pathologic-anatomic studies. Perhaps even in internal medicine the new pathology stimulated to new therapeutic activities by its dictum that disease is not a unit, an entity, but is a disorder, localized in various organs. At any rate, a method of treatment began to be developed which is directed against the disorder of organs and functions or against troublesome symptoms. In the course of many years, by diligent pharmacologic and therapeutic studies, a great many drugs were found and synthetically created which act on the kidneys, heart, gastro-intestinal canal, eyes, skin, etc., or relieve fever, pains, restlessness, insomnia, or supplant deficient secretions. The substitution method of treatment, although it relieves only the symptoms and must, therefore, be classed as belonging to symptomatic therapy, is a very interesting and valuable addition to modern therapeutics and is based on a new conception of the functional activity of some organs, that is, internal secretion. Besides the symptomatic therapy another method of treatment gradually grew up which is now known under the promising name of physiologic therapeutics. Perhaps even this method may have received a stimulus from another dictum of the new pathology, namely, that disease is nothing else but physiologic processes under changed conditions. The underlying principle of the physiologic method is to assist the sick man in getting well by all those means which keep the well man healthy and vigorous. Physiologic therapeutics lays great stress on the proper regulation of diet, air, water, light, exercise; on nursing, physical comfort and mental cheerfulness. All these therapeutic measures have as their aim, not the treatment of the disease, but, as stated before, the treatment of the patient, either to make him fit to resist the onslaught of the disease, or to make him at least comfortable while he is succumbing to it.

With the birth and development of bacteriology there seemed to be a new era in sight for therapeutics. The before-mentioned dictum of pathology that disease is not a unit was proved not to be entirely correct. It was established for various infectious diseases that each one was due etiologically to a well-defined microorganism. It seemed, therefore, plausible to expect that agents, capable of killing these organisms outside of the body, might prove to be efficient remedies for the disease produced by these organisms. A few years' experimentation, however, destroyed this hope; those germicidal agents when administered to the infected animal in sufficient quantity killed the host more readily than the virulent parasite. Yet, in the further development of the new branch of medical science, new, fundamental facts were brought to light and new means were discovered which enabled us in some instances to grapple, indeed, with the disease itself. I speak of the therapeutics of immunity, the principles of which I may perhaps state in the following manner. The old fact, which was disastrous to the old therapeutics, namely, that patients get well without any outside treatment, became the corner-stone for the new therapeutics. Scientists began to inquire into the method which the animal organism employs in dealing with diseases. And there it was found that one more claim of pathology was not entirely correct, namely, that there is nothing new in pathologic processes, that pathology is simply physiology under changed conditions. It was discovered, in the first place, that in diseases the assailed animal organism creates new products by means of which it tries to ward off the blows or even to destroy its assailant; and we have quickly learned to treat some diseases specifically by the very same new products. Either we borrow these products from one animal and give them to another which is short of its own ammunition, as in the case of antitoxins; or we try to stimulate the organs of the afflicted animal itself to a greater production of the defensive agents, as is the case when vaccine is used. We have thus acquired the means of treating specifically and effectively the disease itself or its chief cause at least in two grave cases, in diphtheria and meningitis, and perhaps also in tetanus.

Furthermore, in the course of these studies we have learned another very important fact, namely, that many phenomena which were considered as a part of the disease are actually a part of the attempt of the organism to cure itself. Here again we were quick enough to adopt this therapeutic procedure. Bier's method of treating chronic diseases presents such a brilliant instance. Hyperemia, which was considered as a sign of disease, is here employed as a therapeutic measure.

Let us take rapidly an inventory of our present therapeutic possessions. There are the two old remedies: quinin for malaria and mercury for syphilis. They are specifics indeed, but science and art have no share in their discovery, I shall return to them later. Since the rise of the new era in medicine three groups of therapeutic procedures were developed. 1. Drugs and measures to control or relieve symptoms of disease. 2. Physiologic measures to increase the resistance of the patients. 3. The reaction products of infected animals. The last-named group is beyond doubt one of the greatest acquisitions in therapeutics. But the extent of its usefulness will have natural limitations, which I shall not discuss here. As to the first group, I belong to those who believe that the control of symptoms is a very important factor in the treatment of patients and diseases. The attacks on the value of these drugs came from the anatomic school which never outgrew its therapeutic nihilism. Regarding the second group, I am ready to concede that there is a good deal of self-evident useful truth in the teachings of the school of physiologic therapeutics, but there is a glaring disproportion between the quantity and quality of its preachings. Furthermore, I am afraid that many of the medical apostles of the treatment of diseases by free water, free air, free speech and free press, are at the bottom of their heart therapeutic nihilists as far as drugs are concerned.

In still fewer words: We possess many drugs for treatment of symptoms of diseases, and we are well provided with good advice as how to treat the patients, but we have at our command extremely few remedies for the treatment of the disease itself or its chief cause. And what is worse: a great many of the better class of physicians are still dominated by the old fatalistic doctrine: You may study disease, you may understand it, and you may diagnose it, but you can never cure it.

Now let us look at salvarsan: what it is capable of accomplishing and how it was created. It is proved beyond controversy that salvarsan is capable of completely destroying in the animal body the spirochete of syphilis and of frambesia, the spirilla of European and African relapsing fever and the microorganisms of chicken spirillosis; in short, salvarsan is a specific remedy against a group of diseases caused by protozoan spirilla; it is a spirillocide. And it is not an accidentally discovered drug. We have here the first instance in the history of medicine of an efficient, specific, synthetic drug scientifically developed by the mental efforts of a single scientist. As a specific remedy and a drug it can be compared only with the two other specific remedies: mercury and quinin. I stated before that science and art had no share in the discovery of these drugs. Permit me to narrate briefly their histories. Regarding mercury it is known that corrosive sublimate and calomel were used for skin diseases by Arabian physicians as long ago as the ninth century. The gray ointment was invented in the thirteenth century and was used for the same purpose. When at the end of the fifteenth century syphilis broke out in Europe epidemically, the skin manifestations were treated as before by these mercurial preparations. When later it was recognized that these skin sores were manifestations of a specific disease, gray ointment, calomel and corrosive sublimate remained as remedies for syphilis; and so it went on for centuries. Wood introduced in 1854 the method of administering medicine by means of hypodermic injections; fifteen years later syphilologists began to administer mercury by this method and again corrosive sublimate, gray ointment (oil) and calomel were and still are the chief mercurial preparations employed in this manner. However much modern syphilologists may have contributed to the knowledge of the pathology and symptomatology of syphilis, it is quite evident that they have added very little of fundamental importance to our knowledge of its treatment. At any rate, neither syphilologists nor any one else can claim the credit of having discovered the value of mercury as a specific for syphilis. That knowledge was never discovered; it simply grew gradually in the course of many centuries and, let me add, in spite of violent opposition. For again and again the claim was set up by the antimercurialists that many of the manifestations which were considered as being due to syphilis were only symptoms of mercurial poisoning. Only within the last few years and before the recent salvarsan period, we find statements in the literature to the effect that the mercurial treatment of syphilis led in some cases to polyneuritis, to optic neuritis, to deafness and other affections of the nervous system. To this the syphilologist retorted that the affections of the nervous system in these cases were syphilitic manifestations and due to an insufficient treatment with mercury. Let me say here in parenthesis that we are now confronted with a well-known psychologic phenomenon, namely, that the persecuted readily acquire the methods of their tormentors. Some of our syphilographic friends proclaim now with great assurance that salvarsan causes optic neuritis, deafness and other affections of the nervous system.

Our knowledge of quinin as a specific remedy for malaria has a well-defined beginning. At about the middle of the seventeenth century the Countess of Chinchon, the wife of the Spanish viceroy in Peru, had malarial fever and was persuaded to use the bark of a Peruvian tree which the natives were in the habit of using for the same fever. After testing it first on a servant, she took the remedy and was cured. Her physician, del Vego, brought the remedy to Europe.

These histories show conclusively that science and scientists had nothing to do with the introduction of mercury and quinin as specific remedies.

I have said that the principles underlying the specific action of salvarsan were developed by the mental efforts of a single man. Before speaking of these principles and the various steps in their development, let me say a few words with reference to the personal element. To my mind that factor is of considerable importance for the future development of therapeutics. That science grows which attracts a large number of qualified enthusiastic investigators. In the past the gifted among clinicians were attracted by pathology and diagnosis. The pharmacologists studied the action of drugs on the organs of healthy animals. Neither of them studied the problem of how to cure diseases. Therapeutics did not attain the dignity of a science; the subject was often in the hands of men who did not enjoy the confidence of the discriminating medical savant. The investigator who gave salvarsan to medicine, however, is one of the keenest thinkers in medicine. For one-third of a century he has stood in the front rank of medical investigators and many of his contributions to medical knowledge are masterstrokes. Now this leader of leaders for a number of years bent all his energies to do for medicine that which medicine needs mostly, and that is to find remedies which could destroy the cause of diseases. These efforts were now crowned with a brilliant success. A chemical compound was synthetically constructed which fits exactly to a related group of pathogenic microorganisms, destroying them with one stroke within the animal's body wherever accessible. By the scientific position of the master and by his brilliant deed, therapeutics will rise now to a higher level in the estimation of discriminating medical men. That will help to attract to this field competent medical investigators, and therapeutics may become indeed a fruitful, a useful and a healing science.

Now, let us look at the principles underlying the selective action of salvarsan. Ehrlich's chemotherapy is based on a few comparatively simple assumptions, some of which he conceived very early in his scientific life. Ehrlich assumes that a substance exerts a definite action on a living animal cell only when it becomes intimately connected with this cell or fixed by it. A cell, however, cannot fix any substance unless it has a receptor for it. The receptors for chemical substances Ehrlich calls chemoceptors. Various cells are provided with various chemoceptors. Hence when a chemical substance is introduced into an animal body, it becomes unevenly distributed among its tissues, on account of the difference in the affinities of the various tissues to this substance—the affinity of the tissue meaning the possession of specific chemoceptors for the corresponding substance. When the animal body harbors independent cells, for instance, pathogenic microorganisms, it may happen that only these organisms possess chemoceptors for the substance, or that they possess these receptors in larger numbers than the cells of the host. The result may then be that the substance would be fixed exclusively in these organisms or in much greater proportion than in the cells of the host. And if the union of the substance and the microorganisms would be of such a nature as to lead to the destruction of the parasite, the introduction of such a substance into an infected animal would lead to the extermination of the given parasite in that animal. Furthermore, when that substance is a compound, consisting of various, more or less firmly connected chemical groups, the entire complex might become fixed in certain cells, if the latter possess receptors for one of these groups. In this way a destructive group of a complex chemical compound might become active on a cell which possesses receptors only for one of its innocent partners. By successive attempts at introducing groups possessing receptors for certain microorganisms into a chemical complex possessing a poisonous group, a chemical compound may be finally created which would destroy the parasites and leave the animal host comparatively unaffected. Now that was the method by which salvarsan was created. But what an amount of ingenuity and strenuous endeavor had to be expended before this goal was reached! Ehrlich and his co-workers experimented first with trypanosomes. We shall not speak here of their work with dyes. The path which led up to the creation of salvarsan began with the studies of the arsenical preparations. Atoxyl was the first product which was investigated; but it was soon found that not only the trypanosomes, but also the nervous system of the infected animal, the optic and acoustic centers, possessed effective chemoceptors for this compound. Ehrlich soon recognized the true constitution of atoxyl, which permitted the substitution of various derivatives. And now the long and laborious studies began. At first arsacetin was reached, a promising compound which, however, was not yet free from affinities to the nervous system. The next much more satisfactory product obtained was arsenophenylglycin, which was the four hundred and eighteenth compound in the series. At this period Ehrlich's attention became more concentrated on the action of these arsenical compounds on spirilla. Arsenophenylglycin was found very active on the spirillum of relapsing fever. But still nearly two hundred more compounds were tested until the six hundred and sixth was reached. This product, dioxydiamidoarsenobenzol or salvarsan, proved to be ideal in its effects. It seemed to destroy completely the various forms of spirilla within the animal body. The nervous system of various species of animal hosts remained entirely unaffected by the drug. The curative dose formed in all instances only a small fraction of the toxic dose. Finally a single injection of the remedy accomplished in all the investigated animals and for all forms of spirilla a complete sterilization of the infected animal. Ehrlich laid great stress on this last fact, and for good experimental reasons. In the experiments with the other arsenical compounds and the trypanocidal dyes, it was discovered that the trypanosomes which escaped destruction rapidly acquired complete resistance to the destructive action of the remedies and then became ancestors of very resistant strains of parasites. In consequence of this experience it then became one of the aims of the chemotherapy to obtain a compound which would destroy all the parasites with one injection—*sterilisatio magna*. Such a compound was found in salvarsan; it destroyed with a single injection the various spirilla in various species of animals.

Salvarsan exerts some effect also on trypanosomes, but this effect cannot be compared with its action on spirilla. The same is apparently true also of the effect of salvarsan on the plasmodia of malaria. It seems that salvarsan exercises some general action on the protoplasm of various protozoan forms, but it holds more specific relations to the spirilla. The specificity of these synthetic products is one of the most promising facts. Highly interesting in this connection is the statement of Ehrlich that the arsenobenzol compound which is equally active on trypanosomes and spirilla becomes very active on the latter and indifferent to the former when iodin is introduced into this compound. It is evident that Ehrlich's method of creating synthetically, specifically active chemical compounds, offers great possibilities for future therapeutics. We ought also to remember the one statement of Ehrlich, namely, that he stopped temporarily at 606 because it was not necessary, for the present at least, to look for a still better preparation than salvarsan.

When we now turn our attention to human diseases which are caused by spirilla, we find in the first place that in relapsing fever one intravenous injection of salvarsan is sufficient to destroy completely all the spirilla and rapidly to cure the patient. This shows that the facts which were derived from animal experimentation hold good also for the human species, at least in such cases as relapsing fever, in which the blood is the main abode of the spirilla. It may be mentioned here that cases of filaria also seemed to have been cured by an intravenous injection of salvarsan. The problem, however, becomes complex when we come to judge the effect of salvarsan on human syphilis, for which we possess now quite a large literature. Not the least complicating element is the fact that a good many of the clinical writers on the subject are not sufficiently well trained in the methods of critical scientific observation. Another very disturbing element is the great bias of some of the authors. How else can the astounding facts be explained when one syphilologist states that he gave up the remedy after using it only in a few cases because of its comparative uselessness and of the harm it does to the central nervous system, while his colleague at the same institution reports with unbounded enthusiasm of the wonderful effect of the remedy in fourteen hundred cases of all forms of syphilis with comparatively little by-effects? Is it not further an evidence of glaring bias to ascribe an optic neuritis to the single injection of salvarsan and to leave out of consideration the effects of enesol and arsacetin, with which the patient was treated previously to the salvarsan injection—especially of arsacetin, the damaging effect of which on the optic nerve is an established fact? Besides the complexities emanating from personal factors, we deal in human syphilis with a chronic disease. In some instances the spirochetes are undoubtedly enclosed, at least temporarily, in tissues, which for the time being, cannot be penetrated by the salvarsan solution. Furthermore, the method of administration of salvarsan is still in an unsettled state; it is insufficiently absorbed from some subcutaneous or intramuscular injections, and it is too rapidly eliminated, when it is injected intravenously. In spite of all these difficulties, however, the great mass of accumulated evidence establishes beyond a doubt that in human syphilis salvarsan acts in the same specific manner as in the experiments on animals; that is, it destroys the cause of the disease. The following clinical results are undisputed facts. It was found that with but few exceptions an injection of this drug causes disappearance of all accessible spirochetes. There are already a considerable number of cases on record, in which an early injection prevented so far the development of secondary manifestations, the time elapsed being in some cases seven or eight months. Syphilitic manifestations of nearly all forms and in all stages were profoundly affected by a single injection; there were only a few exceptions to this rule. There are a good many cases in which all the external manifestations disappeared without recurrence so far. These facts are surely sufficient to show that salvarsan acts on human syphilis in a definitely specific manner, that is, it destroys the cause of the disease. Its action is at least as specific as that of mercury on the same disease. It differs from mercury and has some advantages over it in the following points. Salvarsan destroys all spirilla; mercury affects only the spirochetes of syphilis. Salvarsan produces apparently antibodies in the blood as is shown by the effectiveness of the serum and the milk of those who were injected with it; there is no evidence of the formation of antibodies by mercury. The effect of salvarsan is much more rapid than that of mercury; one injection of salvarsan accomplishes in two weeks as much as repeated injections of mercury accomplishes in six weeks. Finally, whereas mercury is inimical not only to the parasite, but also to the host, causing cachexia of the patient, salvarsan, reversely, acts rather favorably toward the host; it stimulates to rapid healing and causes an increase of the weight of the patient. Careful future studies will bring to light any further quantitative and qualitative differences between the actions of the two specifics for the same disease and will determine the conditions in which they may compete or they may supplement each other. This desirable end, however, can be brought about only by an unbiased, judicial and scientific attitude toward the merits and demerits of either of the specific remedies.

Here it must be acknowledged that one of the original important expectations regarding the actions of salvarsan has not been realized in human syphilis. While in the animal experiments one injection cured the disease permanently, this has not been the rule in the treatment of human syphilis, especially when the treatment is begun after the onset of the secondary manifestations. In a good many instances the syphilitic symptoms reappeared even after repeated injections of salvarsan. While it seems that relapses occur less frequently after intravenous injections and become strikingly less extensive and less frequent with the repetition of the injections, the fact remains true that in many instances the syphilitic human body cannot be sterilized with one injection. This fact would have had to be put down as a very serious drawback in the treatment of syphilis by salvarsan, on account of the possibility of the gradual development of resistant strains of spirochetes. Fortunately it has been recently discovered by Margulies, in Ehrlich's institute, that, in contrast to arsacetin and arsenophenylglycin, salvarsan does not produce strains of spirilla resistant to it. This important observation finds its confirmation in recent clinical experience. The third and fourth injection of salvarsan affects the syphilitic manifestations with the same promptness as the first injection. This fact is very significant; it takes away the motive for the aim to destroy all the parasites with one injection, and it may lead to important changes in the method of administration of salvarsan. On the basis of the foregoing considerations I have recently advocated, instead of the use of one large dose, the injection for some time at regular intervals of small doses of salvarsan in very dilute solutions into the lumbar muscles. By this method it may be possible to prevent local and general by-effects as well as relapses. The method offers the further advantage that it could be used by the general practitioner.

The Rockefeller Institute for Medical Research.

SAMBON'S NEW THEORY OF PELLAGRA AND ITS APPLICATION TO CONDITIONS IN GEORGIA

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I wish to call attention to a new theory of pellagra, and especially to apply this theory to conditions in Georgia, and to show that the same conditions exist in Georgia to produce the disease that exist in Italy, the chief home of the disease. This theory was formulated by Dr. Louis W. Sambon, lecturer on tropical medicine at the Liverpool School of Tropical Medicine, who was detailed for three months in 1910 in Italy, where he studied pellagra. Dr. Sambon is a research student of recognized ability. In 1903 he formulated the tsetse fly theory of sleeping-sickness, which has proved true. His "Progress Report" on pellagra and the result of his investigations appeared in the London *Journal of Tropical Medicine* during September, October and November, 1910, and I shall draw freely on these accurate and interesting articles.

First, I wish to define pellagra according to our present knowledge. Pellagra is a non-contagious, non-inheritable disease, of insidious course, characterized by a peculiar, periodic eruption, and a series of symptoms involving the nervous and digestive systems, periodic and progressive. This definition is based entirely on the clinical history of the disease, and does not take into account the cause or the environment in which the disease develops. We can now proceed more fully to the consideration of this new theory of cause and origin.

There is one primary condition on which all theories are based, and one easy way by which we test freely and accurately every theory. It is stated in this simple way: Every theory to be correct must be in accord with the facts. On this simple proposition all theories must stand or fall, and by this same simple rule we may test this new theory of pellagra.

Sambon opens with five propositions:

1. Pellagra is not due to the eating of maize, either sound or deteriorated, as hitherto almost universally believed. In support of this statement are the following facts:

> A. Maize was grown in Italy from one and a half to two centuries before pellagra appeared in that country, and it is, therefore, impossible to connect the introduction of the new cereal with the first appearance of the disease.
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> B. Pellagra occurs in people who do not eat maize or corn products. Casana stated at a meeting of the Catalonian Academy of Medicine that in Spain the greater prevalence of pellagra existed in those provinces where the cultivation and use of corn is unknown. Children contract the disease in Italy as early as the third month, provided they are brought outdoors and exposed to the bites of the *Simulium* fly. An illegitimate child was born in an Italian jail, and at five months was adopted by peasants living along a running stream. It developed pellagra in two weeks after exposure to the bite of this fly, though it had never eaten any corn products of any kind.
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> C. The absolute failure of preventive measures on the part of the Italian government; *e. g.*, the inspection of maize and its products; abolition of the late varieties of maize; notification of cases; and establishment of pellagrosarios for the treatment of the disease.

2. Pellagra has a *striking, peculiar, and well-defined* topographical distribution. In northern and central Italy the pellagra foci are found in the narrower valleys of the country districts, where the streams are infested by the *Simulium* fly. Wherever pellagra is found, these *flies are found in the districts bordering the streams.*

3. These endemic foci, or stations, have remained exactly the same for at least a century. The disease presents the same relative proportions in all the affected districts, and towns are generally exempt.

4. The pellagra stations are closely associated with streams of running water. Pellagra is a rural disease, and the greater number of cases occur in the country districts, and especially among people living along running streams. The greater liability of field laborers is explained by the fact that they are more exposed to the infective agent than others. Nearly all the pellagrins in Italy say that in the spring they are greatly tormented by the bites of the sandflies. These flies are more active in the early morning and late evening.

5. A blood-sucking fly, of the genus *Simulium*, is, in all probability, the agent by which pellagra is conveyed. It is a periodic disease, the seasons of incidence being spring and fall, and the *Simulium* fly has these same periods of activity.

This is a condensed statement of the Sambon report as to conditions in Italy. We now turn to conditions in Georgia. I asked the junior and senior classes in the Atlanta College of Physicians and Surgeons for a statement of the cases of pellagra in their home communities with regard to sex and the relation of the homes of the pellagrins to standing or running water. Georgia is not in the statistical area, and this was as accurate a method as I could find to get an estimate. Thirty-six cases were reported, twenty-six women and ten men. All of the number but one either lived on or very near streams of water; this patient was a banker living in a small town and the relation of his residence to streams could not be determined. Thirty students reported from as many different communities. These separate reports follow:

Number of Report.	Number of Pellagrins.	Residence.
1	3	Swamp, 3 streams.
2	3	Swamp.
3	1	Stream within 50 yards.
4	1	Location wet and swampy.
5	2	Stream within ¼ mile.
6	1	Unknown.
7	1	¼ mile standing water.
8	1	¼ mile branch.
9	1	Between two streams.
10	1	¼ mile pond and stream.
11	1	300 yards of a branch.
12	1	On Chickamauga Creek.
13	1	Within 200 yards of creek.
14	1	Within 300 yards of creek.
15	2	Within ¼ mile of creek.
16	1	On stream.
17	1	On stream.
18	1	Resided on pond 5 years.
19	1	Between two springs and fresh branches.
20	1	Within 1 mile of stream.
21	1	Within 250 yards of stream.
22	1	Within 200 yards of stream.
23	1	12 years within 100 yards of stream.
24	1	15 years within 100 yards of stream.
25	1	Within 1 mile of stream.
26	1	Within ¼ mile of stream.
27	1	Within 30 yards of stream.
28	1	On sea coasts.
29	1	In city.
30	1	Within 100 yards of stream.

The testimony of these thirty men from different sections of Georgia and some of the other southern states agrees in this: The cases of pellagra in the South originate in those living on or near streams of running water. The idea was new to these students; they were from places far distant from each other, and yet their testimony is practically united. While in Franklin, N. C., last summer I investigated the premises and surroundings of a pellagra patient, a woman, who had recently died. The house bordered the road in front, and behind a branch of rapid mountain water ran within fifty feet of the back porch. On the right of the house was a perfect swamp, and the stream marked out a narrow mountain valley; exactly the same topographic conditions found in Italy by Sambon. These valleys and stream areas were so alike in situation and environment that he was able, after viewing the topography of a given locality, to state whether pellagra existed in that locality, and this without being once in error, and even before he was given the pellagra statistics of the given area.

The *Simulium* fly is of the order *Diptera*, or two-winged flies; family *Simuliidæ*; with the one genus *Simulium*, having species. Of these Sambon found three species in Italy—*Simulium reptans*, *S. ornatum*, and *S. pubescens*, chiefly the last. The two chief species in America are *Simulium venustum*, or black fly, the great biter of the Northern woods; and *Simulium pecuarum*, the southern buffalo gnat. This buffalo gnat causes the death of many mules and domestic animals. It is found along the tributaries of the Mississippi river, through the state of Mississippi, possibly all of Arkansas, in Tennessee, Kentucky, and parts of Missouri, Illinois, and Indiana. Since 1850 this buffalo gnat has killed many thousand domestic animals. The gnats appeared in Mississippi as early as 1818, and in 1884 killed in Franklin Parish, La., 300 head of stock in one week. They do not seem to appear every year in damaging numbers, but are always more numerous in time of flood. Sambon notes that in Italy the greatest number of pellagra cases occur in the flood and overflow years.

Two crops of the insect emerge from the streams each year; one appearing from February to April, and the other from September to December. The eggs are laid, when possible, in streams of rapid, shallow water, as in an ordinary branch or creek. Rock, leaves and brush in the water are good places. They hatch in about eight days to a larva, passing in about four weeks into the pupa stage, and emerging in three weeks, after having spent the pupa stage in the bottom of the stream, as the mature two-winged fly or gnat. Pellagra is most active in spring and autumn, and toxins have no relation to seasons, whereas diseases of parasitic origin are seasonal.

It has been shown that the same topographic conditions exist in Georgia and some of the other southern states that Sambon found in Italy. It has also been shown by the united testimony of several students that practically all the cases of pellagra are rural in origin and exist along streams. I asked Dr. Bradley, assistant state entomologist of Georgia, to determine for me, if possible, whether any species of the *Simuliidæ* existed in Georgia. He consulted Dr. J. M. Reade, professor of botany in the University of Georgia, at Athens, and they found in a creek two miles from Athens the larvæ of the fly in such numbers that they completely covered some of the rocks. Attached at the anal end, they waved their two modified mandibles in the fast-flowing water in search of desmids, diatoms, and other aquatic growths. They were found February 8, and they merged as the spring brood of the mature fly March 27, 1911. This species was identified as *Simulium pictipes,* a remarkably large species, found also and reported from the Adirondack Mountains, Texas, Michigan and California. This species was identified for Dr. Bradley by Dr. O. A. Johannsen of the Maine Experiment Station. The third condition exists in Georgia as in Italy, viz., the presence of an abundance of *Simulium* flies. Lastly, we have a large rural population, as has Italy.

To summarize:

1. Georgia and Italy both have pellagra.
2. The two have the same topographical conditions.
3. Pellagra originates in both territories along streams.
4. Both countries have many *Simulium* flies.
5. Both countries have a large rural population, from which most cases of pellagra originate.

This theory of Sambon has received the support of Sir Patrick Manson in the fourth edition of his book on tropical medicine; and Castellani and Chalmers support it in their recent book on the same subject. Professor Terni at the Pellagra Congress held at Milan, and Drs. Moore, Wood and Taylor, spoke in favor of Sambon's insect theory at the Columbia, S. C., Congress on Pellagra, though Sambon had not in 1908 connected the *Simulium* with the disease. The supreme criticism of the theory lies in the fact that the parasite has not yet been discovered, and this discovery is necessary to complete the theory. Analogies are always dangerous, and when pursued too far lead one into an illogical abyss, but I think that there is an analogy between pellagra and malaria. Both develop in swamp and stream localities, both have periods of seasonal incidence, and removal from the endemic areas common to each disease results in improvement, and prevents reinfection. Laveran discovered the parasite of malaria in 1880, but it was not until 1898 that Ross discovered the mosquito as the definite host. The discovery would have been just as real had Laveran discovered the insect first, and Ross the parasite last. Indeed, this is the order in which Sambon discovered the tsetse fly and the sleeping-sickness parasite as the cause of sleeping-sickness—insect first and parasite last. The parasite of pellagra is a discovery to which we may look forward in the near future. Certain it is that the corn theory is not in accord with the facts, and must die the death of unfounded theories.

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A DIRECTORY FOR WET-NURSES: ITS EXPERIENCES FOR TWELVE MONTHS

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Most general practitioners and all men who deal especially with infants have had at one time or another occasion to find a wet-nurse for some sick baby. Often it has been a question of obtaining human milk within twenty-four hours to save the life of the baby. Anyone who has searched for a wet-nurse and has hunted hours and sometimes days without success, knows what a discouraging chase it has been; it has been doubly so when the emaciated baby was quickly slipping beyond all hope of recovery.

An attempt was made, about ten years ago, to register wet-nurses at the Boston Medical Library under the same system as an intelligence office and thus to centralize the demand and supply. This was a failure for several reasons: A mother who was forced to wet-nurse usually did so because she had not enough money to live on and, therefore, could not wait for a position. If she was married her husband had either deserted her, was dead, or incapacitated by disease, and she, therefore, was forced to become the wage earner of the family; if she was unmarried, she was either deserted by the father of her child or was unable to obtain help from him for various reasons. If she was lucky enough to obtain other sorts of work she weaned the baby immediately and boarded it with some woman. The attempt at the Boston Medical Library was, therefore, a failure. In 1906 Dr. F. P. Denny of Brookline, in closing the discussion of a paper that he read before the American Medical Association, said, "If some charitable institution, preferably a hospital under medical supervision, would keep at least a registry for wet-nurses, whose antecedents are well known, it would be of great benefit. Such an institution, using every precaution, in desperate cases, might furnish breast-milk on short notice." The matter dropped there and nothing more was done. This paper is a description of a directory and home for wet-nurses which has been run for one year, and which has been the means of saving many babies' lives. So far as I can find out, this is the first successful attempt to establish a directory for wet-nurses.

Two things are necessary for success: first, the directory must be run in connection with some babies' hospital where the problems of breast-feeding are understood; and second, the women must have a home where they can wait for work without expense to themselves. The money necessary for this venture was given by a philanthropist who made no restriction as to the scope of the work, but who wisely insisted that it should be widely advertised.

On Feb. 1, 1910, the directory was opened, under the supervision of the hospital of the Massachusetts Infant Asylum. A moderate-sized house was obtained with a parlor, kitchen and three bedrooms fitted for six women and their babies, and accommodations for a matron. The women at first took their meals at the hospital; later it was found wise to send the meals from the hospital to the house in a specially constructed box which was donated by one of the directors. The food is good and wholesome, such as is given to the wet-nurses in the hospital.[1]

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[1] Talbot, F. B.: Two Methods of Obtaining Human Milk for Hospital Use, Boston Med. and Surg. Jour., March 2, 1911, p. 304.

showed characteristic lesions of experimental poliomyelitis in the spinal cord.

The experiments recorded merely show that flies contaminated with the virus of poliomyelitis harbor the virus in a living and infectious state for at least forty-eight hours. They do not show that this is the limit of the period of survival, and they throw no light on the question whether the virus is retained merely as a superficial contamination or whether it can survive in the gastro-intestinal tract Experiments relating to these points are in progress.

HEXAMETHYLENAMIN: A REMEDY FOR COMMON COLDS

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Acute infections of the upper respiratory tract, whether manifested as coryza, acute rhinitis, pharyngitis, or tracheobronchitis, are of the commonest incidence. A "cold," the grip, influenza nostras, catarrhal fever, acute bronchitis, are common terms used to designate such attacks. The infectious nature of the disease is almost universally accepted, although the identity of the infecting agent is not established. Walter's investigations[1] are of practical interest. He shows that the *Bacillus segmentosus* of Cautley and the *Micrococcus catarrhalis* are probably sometimes causative of acute rhinitis and infections of the middle ear and accessory nasal sinuses.

A cold may cause as much suffering and incapacity as many diseases considered more serious. Often the illness is prolonged from the usual few days to ten days or two weeks. These infections are only too frequently the starting-point of complications that are a life-long menace to well-being. Among such complications and sequelæ are a predisposition to repeated attacks, a tendency to "catch cold" easily, suppurations of the accessory nasal sinuses, otitis media, hypertrophied and chronically inflamed tonsils, adenoids, etc.

The diversity of treatment of colds is common knowledge; doctor and layman alike prescribe hot drinks, foot-baths, sweats, quinin, coal-tar antipyretics, Dover's powders, whisky, and so on. And some as wisely prescribe time, since the disease is self-limited and a recovery is the rule after a period of greater or less discomfort.

In view of the reported excretion[2] of hexamethylenamin in the saliva, and by the middle ear and bronchial mucous membrane, I have been for the past year prescribing it for common colds.

In most cases it acts promptly and efficiently. The irritating, watery secretion of coryza stops; the fever, aching and malaise of influenza cease; the threatening disease is averted.

Hexamethylenamin should be administered at the earliest possible moment; that is, when the nose begins to feel stuffy or the discomfort begins—"when the cold is being caught." Its use, after the infection has existed for several days, is less gratifying, possibly on account of the mixed infection at that time with pus organisms.

As to the dosage, it seems necessary that a larger amount must be given to obtain antiseptic results in the gall-bladder, subarachnoid space or on the nasal mucous membrane than is required as an antiseptic in the urinary tract. The findings of Crowe[2] seemed to indicate that 75 gr. a day must be given in order to obtain quickly the desired effect in the gall-bladder. At the onset of a cold the following prescription, which makes the dose 15 gr. four times in twenty-four hours, is efficient:

℞
Hexamethylenamin .... gm. 12| or ʒiii
Div. in chart. cerat. No. xii.
Sig. One powder to be taken in a goblet of cold water four times daily.

Copious water-drinking is encouraged, which lessens the possibility of bladder irritation. This latter is the only ill effect of the drug, but it occurs only occasionally and ceases at once when the medicine is discontinued. As a cure for colds it may be as great a boon as it has been proved to be as a urinary antiseptic.

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[1] THE JOURNAL A. M. A., Sept. 24, 1910, p. 1091.

[2] Crowe: Bull. Johns Hopkins Hosp., 1908, xix, 109; Barten: THE JOURNAL A. M. A., March 12, 1910, p. 871; Heitmuller: ibid., April 9, 1910, p. 1222; Hanzlick: ibid, June 11, 1910, p. 1940; Brown: ibid., April 16, 1910, p. 1308.

TUBERCULOUS JOINT-DISEASE

REPORT OF A CASE ILLUSTRATING THE CRITICAL WATCHFULNESS DEMANDED DURING CONVALESCENCE

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The patient, a young woman, had suffered since four years of age from hip-joint disease. She had been under the care of four different surgeons, all excellent men of high standing. While a patient of the third surgeon, she became very impatient to have the apparatus removed. She was wearing at this time some sort of a convalescent splint the exact nature of which I do not know.

About five years ago the patient put herself under the care of the fourth surgeon and was immediately told that she should have discarded all braces ten years before. Since that time she has not only been without any protection to the joint but has had *massage* and *passive movements* prescribed. She complained of weakness from the first and during the last four years it has been increasing. The surgeon does not seem to have appreciated the true significance of this subjective symptom nor of the more indicative signs which are now well marked but must have been discoverable any time during the last three or four years. Weakness on first removal of a support would be expected but with careful directions, looking to the prevention of over-use, etc., this should tend to lessen rather than increase if convalescence is to result in a cure.

At present she is able to walk but a short distance and uses the leg more as a prop or stay than as a support. Examination shows: An area of acute sensitiveness behind and above the great trochanter; marked muscular spasm as the limitations of motion are reached, and acute apprehension of the joint to weight-bearing or to the interarticular pressure caused by attempting to raise the leg from the table when in the reclining position.

A radiograph showed absence of head and neck of the femur, an almost completely filled acetabulum, and a partially formed socket above the old one, in which the remainder of the neck is articulating. There is a spot, half an inch in diameter, back of the trochanter, which appears to be the site of an active inflammatory process.

Protection from all weight-bearing, by the use of crutches, has been ordered, without any apparatus for either immobilization or traction, and, the patient's general condition being excellent, it is expected that frequent examinations will determine a disappearance of the signs and that six months or possibly one year will find the crutches unnecessary. Should the signs persist or increase, more protective measures will have to be adopted. Passive movements and massage are emphatically forbidden.

This case seems to illustrate the necessity of frequent examinations during convalescence from hip-joint disease. In no other way can the signs of Nature be properly interpreted. Her approval or her disapproval of the demands made on the joint must be recognized and means must be taken to follow the path she points out before serious damage is done the recovering articulation.

ANOTHER CASE OF SPOROTRICHOSIS IN MAN

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In view of the considerable number of sporotrichal infections in man reported recently by Sutton and others from the middle West, the disappointments experienced by practitioners who fail to recognize the character of the infection, and the pain, danger and expense to which these patients are often subjected, the following more or less typical case may be of interest.

History.—The patient, C. H. B., aged 17, was the son of a farmer, a native and resident of Kansas. The family history was exceptionally good; past history negative. The present trouble consisted of an indolent ulcer on the left knee and four nodules on the inner side of the left thigh with the history that about one month before a small red papule appeared on the knee, which was opened with a needle. This papule spread out slowly and the nodules appeared one at a time. At this time the patient came under my care. There were no subjective symptoms excepting occasional prickling sensations about the ulcer.

Examination.—No systemic disturbance, enlarged glands, impaired functions or any other lesions were found. The ulcer was 3.5 cm. long, 1.5 cm. wide, 3 or 4 mm. deep, covered with a tough brown crust and filled with a dark brown, thick, tenacious pus. The edges of the ulcer were thickened, undermined and bluish-red in color. The line of junction of diseased and normal skin was clearly marked. The area, from edge of ulcer to normal skin, was about 7 mm. The nodules were cutaneous bodies evenly distributed over the lower two-thirds of the thigh, varying in size from a large pea to a hazelnut, definitely outlined and hard except that the lowest one fluctuated in the center. The lowest two were covered with bluish-red skin, the other two with normal skin. None of the lesions was painful or tender and no connecting lines or marks were found.

Treatment.—The pus was evacuated and the wounds dressed with solution of iodin. The patient was given increasing doses of potassium iodid.

Recovery was prompt and uneventful.

Therapeutics

ACUTE ENTERITIS IN CHILDREN: SUMMER DIARRHEA

While pediatricians ridicule the use of the term "summer diarrhea" as unscientific and inexact, still, when one hears or reads the term, a well-defined clinical picture appears before the mind. We all recognize that children from birth up to the age of 1½ or 2 years are especially liable, during the hot weather of our temperate zone, to be affected with frequent loose movements of the bowels, which not infrequently produce serious and sometimes fatal results.

The pathology of this condition is less definitely understood by us than the clinical symptoms and appearances. Even to apply to it the term "acute enteritis" is not free from criticism of inaccuracy and inexactitude. In a large proportion of cases, the trouble would seem to be, to a great extent, in the small intestine, and in another large proportion of cases the large intestine is equally and sometimes more extensively affected than the small intestine. Often, too, frequent vomiting would indicate that the function of the stomach is not performed in an entirely normal manner. In the cases in which the large intestine is extensively affected, and in which the presence of blood in the stools and tenesmus are common symptoms, it is fair to make a separate class and distinguish these cases as cases of colitis or ileocolitis.

In those which we distinguish as enteritis and in which it is customary to believe that the small intestine is chiefly affected, the most conspicuous symptom is diarrhea, accompanied sometimes by pain in the middle of the abdomen, but without tenesmus. This class of cases includes a considerable proportion of those forms of disease which have been distinguished as cholera infantum mainly from the rapid onset of the symptoms and the great depression which attends its onset. Possibly in the future a certain proportion of these cases may be distinguished from cases of ordinary acute diarrhea in children on account of the determination of some different bacterial origin.

Limiting, then, our attention at the present time to the cases of ordinary diarrhea seen in infants and young children during hot weather, it has been proposed (see article by Charles Hunter Dunn, THE JOURNAL, Aug. 21, 1909, page 599) to separate these cases into four classes: (1) those in which nervous influence has an important part in producing the symptoms; (2) those in which indigestion is the chief factor; (3) those in which bacterial fermentation seems to be of especial importance; (4) those in which bacterial infection is observed. The latter two it has been proposed by some writers to consolidate into one class and distinguish them as caused by bacterial action, but in the former class the bacterial action is exerted on the intestinal contents by the so-called saprophytic bacteria, while in the latter class the bacteria act on the tissues of the body. This third class has been designated, in accordance with the classification adopted by the pediatric department of Harvard University, as intestinal indigestion with fermentation, or fermental diarrhea. To this class belongs the larger proportion of cases of ordinary summer diarrhea of infants.

The descriptive term, "summer diarrhea" suggests several factors which have an important etiologic relation to this condition. First, during the hot weather of summer, young children become debilitated simply through the influence of the extreme heat. Second, during the hot weather the food-supply of infants is subject to special contamination and deterioration, consisting, as it does, mainly of milk, which usually undergoes transportation and more or less handling, so that a considerable number of hours elapses from the time it leaves the cow until it is consumed by the infant.

The *treatment* of this acute enteritis occurring in children during hot weather is not chiefly medicinal, but the most important part of the treatment is the hygienic and preventive treatment. In order to prevent these attacks of diarrhea, the child should be kept, so far as possible, from exposure to excessive heat, and should also enjoy a constant supply of fresh air. These conditions are secured least advantageously in the city, and especially in the crowded tenements where most of the poor people live, and where most of the children are compelled to pass the early part of their lives. In order to avoid the excessive heat and to obtain the necessary fresh air, it is exceedingly desirable that the children should be taken into the country or to the seashore during the months of July and August. Failing this, they should be kept out of doors as much as possible, on shaded roofs, in parks or, if possible, on ferry boats or boats provided especially for the health and amusement of the children of the poor. Daily bathing in tepid or cool water helps greatly to promote the comfort of the children who are obliged to remain in crowded houses.

Next to the air, the food demands consideration. As has been so repeatedly stated, the best food for the child, certainly during the first six months of its life, probably during the first nine months, and possibly during the first year, is the milk obtained from the mother's breast. Children who are fed in this way are far less liable to suffer from intestinal disorders during the hot weather than children who are fed on artificial food. In children who are not nursing at the mother's breast it is of the highest importance to give milk which is fresh, uncontaminated, and which has not undergone changes incident to fermentation and decomposition. Much has been said recently about the necessity of quickly reducing the milk to a temperature of about 40 F., and of keeping it at that temperature until it is used. This unquestionably prevents, to a great extent, deleterious changes in the milk, but these changes are far less likely to occur when the milk is used promptly after being obtained from the cow. Of course, in the largest cities where all the milk must be brought from a distance in the country, it is impracticable to obtain milk until it is at least twelve, often twenty-four, and possibly in some cases thirty-six hours old. Under these circumstances, special care must be taken to preserve the milk from contamination and from undergoing the changes which make it a poor food for infants. On the other hand, in the country and in the smaller cities there is really no reason why the milk should not be obtained fresh, so that it will not be more than twelve hours old when it is delivered to the consumer, and in many instances it is possible to obtain it directly from the cow twice a day. Under these circumstances, the problem of infant feeding is greatly simplified.

In children who have been weaned shortly after birth, cows' milk is probably the best substitute for mother's milk, which it is practicable to obtain, but in young infants it is not proper to feed cows' milk, however fresh, without modifying it so that it may conform more nearly to the composition of mother's milk which corresponds to the present age of the child. This matter of milk modification was referred to in this department Aug. 6, 1910, page 504. When these important prophylactic measures have not been carried out with sufficient precision and the infant has become the victim of an attack of acute enteritis, the problem becomes a somewhat different one.

When called to attend an infant who has recently been attacked by diarrhea, the first question which arises in the mind of the physician is as to the propriety of administering some laxative in order thoroughly to clear out from the intestine the offending material which is believed to be present there and to be causing a continuation of the diarrhea. Almost all writers and teachers to-day agree that the treatment should be initiated by the administration of a laxative. They do not, however, agree on which of the different laxatives should be selected. Castor oil, calomel, the salines, and rhubarb all have their advocates. Perhaps most writers advocate the use of castor oil, if it seems probable that the stomach is in a condition to tolerate it. It has been advised to administer castor oil at a considerable interval, as two hours, after any nourishment has been taken into the stomach, and to refrain from giving any further nourishment for two hours more. In case the first dose is vomited, a second dose may be given an hour later. If the patient is not vomiting at the time and no food is given for a considerable period before and after the administration of the oil, it will not, as a rule, cause vomiting, and will act speedily and effectively, and from its after constipating effects will prove doubly useful, both clearing out the offending matter from the intestine, and then checking a further tendency to diarrhea. If calomel is selected as the cathartic, it may be given in doses of from 1/20 to ¼ grain, repeated at intervals of half an hour until six or eight doses have been taken. Or a single large dose may be given with milk of magnesia. This acts less promptly than the castor oil, but is a favorite remedy with many practitioners. Others prefer one of the salines, especially sodium sulphate, which may be given in dose of 10 grains to a child six months old, or 20 grains to a child a year old, as recommended by La Fetra. This depletes the intestinal circulation and at the same time clears out any fermenting food, bacteria or toxins which may be in the intestine. Another useful laxative is rhubarb, which may be combined with soda. This requires several hours for its action but, resembling castor oil, it has the advantage of having an after constipating effect, and so counteracts the continuance of the diarrhea.

It should not be overlooked that there are still a few practitioners who, when called to a case of this kind, and finding that the patient has already had half a dozen or a dozen copious, loose movements from the bowels, are of the opinion that further stimulation of intestinal action is unnecessary, and commence the treatment with an opiate, administering it with the idea of checking the excessive action of the muscular coat of the intestine, and feeling that there is less danger from the absorption of products of fermentation in the intestine than from the weakening of the patient by the excessive intestinal action.

After the intestine has been thoroughly emptied by the administration of a laxative, it is customary to deny the patient any food at all for from twenty-four to forty-eight hours. Thirst will be a prominent and distressing symptom, and to meet this it is customary to give small quantities of water at frequent intervals. Some physicians, instead of giving simple water, give barley water, feeling that they are giving some nourishment in addition to the water, but the amount of nutriment so administered is very, very small. After from twenty-four to forty-eight hours the feeding of the child must be resumed. The most generally useful food is milk, which should be modified, of course, to the age of the child and the power of digestion, if that can be learned. If the capacity of digesting proteins is impaired, the proportion of proteins should be reduced. If, however, the capacity of digesting starchy foods is impaired, these should be reduced. Some believe that the digestive power of the individual can be learned by observation of the feces; that when the feces have a fetid odor, the power of digesting proteins is impaired; when they have a sour odor, the power of digesting starch is impaired; and when they have a rancid odor, the power of digesting fat is impaired. It will usually be found desirable not only to modify the milk in proportion to the age of the child, but to give this modified milk diluted so as to render it easier of digestion. In many cases it will be of advantage to give the milk partially predigested by the use of pancreatin with the bicarbonate of sodium. For instance, the following may be used:

℞	Gm.		
Pancreatini	2	or	ʒss
Sodii bicarbonatis	8		ʒii

M. et fac chartulas 24.
Sig.: Use as directed.

Dissolve one powder in two tablespoonfuls of water and add eight tablespoonfuls of milk. This may be gradually warmed and given to the child as soon as it gains the required temperature, or, having been raised to a temperature of about 100 F., the warming process may be continued for four or five minutes. If the warming process is continued for very many minutes the milk will develop a bitter taste and become less palatable to the patient, although, of course, not less digestible.

Here, again, the therapeutic management of the child may be varied according to the population of the city where he resides. Owing to the difficulty of obtaining fresh milk in the largest cities it will often be found advisable to resort to condensed milk. Thirty or forty years ago condensed milk enjoyed great popularity as a food for infants because it received the recommendation of specialists in the diseases of children who lived in the largest cities and who realized the difficulty of securing an adequate supply of fresh, uncontaminated milk for their poorer patients. Condensed milk became almost a craze, and the craze passed on from the larger cities to the smaller cities, and even to the country districts, but a few years sufficed to prove that children who were brought up on condensed milk were not so well developed as children who were fed on fresh cows' milk, and the pendulum swung the other way and condensed milk fell into disuse. However, in many instances, in the large cities, for brief periods of time, as for instance during the hot summer months of July and August, it will be found a most useful adjuvant in the feeding of children. If deemed advisable, one of the many artificial foods may be tried for a short time.

Beef juice, beef tea, and other meat preparations may sometimes prove useful temporarily, but their importance is so little compared with that of milk that their discussion need not detain us longer.

No child should ever be treated for any acute disorder without the physician ascertaining its temperature. When, in these cases, the child is found to have some fever, active efforts should be made to combat it. The most useful method of accomplishing this is by means of tepid or cool baths in connection with fresh air and avoidance of exposure to the sun. A sick child, and especially a child ill with diarrhea, should never be moved about by the handling and tossing up and down of which ignorant people are so fond. Nor should he be wheeled long distances in a baby carriage, which also imparts a continuous series of jolts to the little invalid. He should be laid on a bed or on a pillow and kept as quiet as possible. He should, especially if he has pain, have warm applications made to the abdomen. These may be a small rubber bag partly filled with warm water, a hot poultice, a spice paste, or simply hot flannel dry or moistened with alcohol and water.

Having discussed thus in detail the most important part of the treatment of the child, there remains now to speak of the less important part, the medicinal treatment. The most popular drug in this class of cases is bismuth. The notion that many physicians have that subnitrate or subcarbonate of bismuth coats over the mucous membrane of the intestine and so relieves irritation and inflammation is probably generally a delusion. Whether it acts as an antiseptic in antagonizing decomposition and fermentation of the intestinal contents, has not been determined. On the ground that small doses cannot have very much effect in protecting the mucous membrane of the intestines, it has been proposed to give large doses, of from 15 to 30 grains, but while some may hesitate to give doses of this size, there is considerable clinical evidence in favor of the usefulness of smaller doses, of from 5 to 10 grains.

Another drug of perhaps equal repute with bismuth is phenyl salicylate (salol). This often allays vomiting, if it is present, often relieves pain, and unquestionably diminishes fermentation and decomposition. It may be given in a dose of ½ grain for a child of one year, or 1 grain for a child of two years, repeated every two hours. It should not be given, however, for more than ten doses at this rate, as it readily causes phenol poisoning. If given longer the frequency of the dose should be reduced to once in six hours.

Again the question as to the advisability of giving opium arises. If, after the intestinal canal has been thoroughly cleared out the frequent loose movements continue, it will generally be found that small doses of opium will prove useful. The best preparation for children is probably the tincture of deodorized opium. The proper dose of this for a child of from 1 to 2 years is 1 drop, and for a child of 6 months it is ½ drop. With this drug may be combined various aromatics. Many physicians still use some combination of bismuth and opium, as:

℞	Gm. or c.c.		
Bismuthi subnitratis	6		ʒii
Mucilaginis acaciæ (fresh)	25	or	fl.℥i
Tincturæ opii deodorati	1		♏xviii
Aquæ cinnamomi	ad 100		ad fl.℥iv

M. et Sig.: A teaspoonful, in water, every two hours. Shake.

It has been shown in the laboratory that the bismuth subnitrate can, although it is exceedingly rare that it does, cause a little irritation and nitrite poisoning. The bismuth subcarbonate can never do any harm; therefore, it seems advisable to always give the subcarbonate of bismuth rather than the subnitrate. Also, it seems not good prescription-writing to put bismuth, an insoluble preparation, into a solution which must be shaken, and in which the amount of bismuth in one dose may not represent the amount in another dose. It is much better, therefore, to order bismuth in powder and have this put into milk, or whatever nutriment the child is receiving. It can be put into a teaspoon of milk, and the child will readily sip it down. It may be ordered alone or in combination with phenyl salicylate as above suggested. A prescription for a child one year old would be as follows:

℞	Gm.		
Bismuthi subcarbonatis	6	or	ʒiss

Fac chartulas 20.
Sig.: A powder every two hours.

Or:

℞	Gm.		
Bismuthi subcarbonatis	3		gr.xlv
Phenylis salicylatis	50	or	gr.viii

M. et fac chartulas 10.
Sig.: A powder every two hours.

It is much better to order the deodorized tincture of opium alone and administer a drop or more, as deemed necessary, every three or four hours, depending on whether the child is drowsy or not. If less than one drop is required, it is easy for the nurse to put a drop into two teaspoonfuls of water and give the child one of them, which would represent ½ a drop of the preparation.

If the heart becomes weak, whiskey or brandy may be given. For a child 1 year old, from 10 to 20 drops, in plenty of water, and given at intervals of two hours, is a large enough dose.

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[*For other information see second page following reading matter*]

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GROWING ANIMAL TISSUES OUTSIDE OF THE BODY

Wöhler in 1828, by synthesizing urea, performed what up to that time was considered to be impossible, namely, the artificial production of an organic substance from mineral matter. Since then up to the present time there have been few advances in biology which seem so startling as do those which have been made in recent years, resulting in the establishment of a technic whereby animal tissues may be made not only to live, but also actually to grow outside of the body.

Harrison,[1] working at Johns Hopkins, in 1907, was the first actually to cultivate tissues outside the body. He found that the embryonic tissue of frogs, when transplanted into coagulable lymph, would develop normally. Burrows[2] in 1910, working under Harrison at Yale, was the first to grow normal tissues of warm-blooded animals; he used chick embryos in his experiments. Finally Carrel and Burrows[3] at the Rockefeller Institute, in September, 1910, succeeded for the first time in cultivating mammalian tissues. Recently they[4] have published a complete account of their technic and results. It was found that almost all the adult and embryonic tissues of the dog, cat, chicken, rat and guinea-pig could be easily cultivated *in vitro*. The life of these tissues varies from five days to about twenty days; but it may be prolonged by secondary and tertiary cultures. This property of growth *in vitro* is not limited to tissues of the lower animals, but is a characteristic also, at least to some extent, of human tissues; for these investigators succeeded in cultivating two human tumors, a sarcoma of the fibula and a carcinoma of the breast. In this connection it is interesting to note that a tumor grown outside of the body may also retain its malignant features; for a culture *in vitro* of the Rous fowl sarcoma when inoculated into a chicken caused the development of a sarcoma.

Lambert and Hanes have studied the question of cancer immunity by the method of cultivating tissues *in vitro*. They have found that "sarcoma cultivated in plasma from immune animals grows quite as vigorously as in plasma from normal and tumor-bearing animals, thus affording further proof of the absence of specific cytolytic substances in the body fluids of animals immune to transplantable cancer." Although animals may be successfully inoculated with sarcoma cultivated *in vitro*, there is evidence of diminished virulence. The duration of life of sarcoma cells grown in plasma seems dependent only on a renewal of the medium.

At Carrell's suggestion, Ruth has studied, also by this means, the phenomena which occur in the cicatrization of wounds, developing principles outlined earlier by Carrell. For the purpose Ruth used small fragments of the skin of guinea-pigs and frogs in the centers of which he made a rectangular wound. The skin of the guinea-pig developed in most instances connective tissue cells alone; but the skin of adult frogs generated epithelial cells almost exclusively. He states that repair of such wounds consists of three mechanisms, as follows:

1. Sliding of the epithelial edges of the wound toward the open central spaces, a process which occurs during the first six or twelve hours.

2. Epidermization, a stage during which there is a wandering out of epithelial cells from the edges of the shifted epithelium, either as isolated cells or as a thin continuous layer. These processes grow towards each other from opposing edges at a rate of about 0.06 mm. per hour, so that a wound of about 0.82 by 0.32 mm. may be completely covered by epithelium about ten hours after the preparation of the culture.

3. Progressive contraction of the original edges of the wound, with the result that the space between the edges diminishes and the epidermized surface may finally be less than one-fourth of the original area of the wound. On the basis of Jacques Loeb's discovery that in certain marine animals growth is accelerated by a slight diminution and retarded by a slight increase in the osmotic tension of the surrounding fluid medium, Ruth found that the rate of growth of new epithelium was increased by a diluted medium both *in vitro* and *in vivo*. Thus, he was able to retard or to accelerate the rate of growth of epithelial cells by injections into his animals of hypertonic solutions or distilled water.

The technic employed by these various investigators consists essentially in placing small pieces of living tissue into fluid plasma which will coagulate immediately, and in maintaining the growth at the proper temperature. The observations are then made by keeping the cultures on a warm stage of a microscope. In a discussion of their methods Carrell and Burrows state that theoretically the technic is very simple and that it is not at all difficult to obtain at least some growth of a tissue *in vitro*.[5]

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[1] Harrison: Proc. Soc. Exper. Biol. and Med., 1907, iv, 140.

[2] Burrows, Montrose T.: The Cultivation of Tissues of the Chick-Embryo Outside the Body, THE JOURNAL A. M. A., Dec. 10, 1910, p. 205.

[3] Carrel, Alexis, and Burrows, Montrose T.: Cultivation of Adult Tissues and Organs Outside of the Body, THE JOURNAL A. M. A., Oct. 15, 1910, p. 1379.

[4] The articles by Carrel and Burrows, as well as those to which reference is made later in this editorial, are to be found in the Journal of Experimental Medicine, April and May, 1911.

[5] Carrel, Alexis: The Treatment of Wounds, THE JOURNAL A. M. A., Dec. 17, 1910, p. 2148.

By modifying their technic somewhat Carrel and Burrows have made the very important observation that certain laws of growth discovered by Jacques Loeb in lower organisms are true also for higher organisms; and in this respect their results are in agreement with those of Ruth previously mentioned. On the assumption that the blood is not the best possible medium for the growth of tissues they attempted to discover as nearly as possible what constitutes an optimum medium. Their reasoning in this connection is very interesting. "If the blood were the best possible medium, the cells would grow without restraint, the organs and tissues would lose their relative size and morphology and the whole body would become monstrous. Therefore, it may be assumed that the power of growth is kept under constant restraint, that every organ is compelled to follow the morphologic plan of the organism and that normal plasma is far from being the optimum medium for the culture of normal cells." From their experiments, which consisted chiefly in altering the osmotic tension of the plasma, they conclude that each tissue has probably its optimum medium. In general, hypertonic solutions retarded and hypotonic solutions accelerated the growth of tissues. For the spleen (of a chick) the optimum medium seemed to be three volumes of plasma to two volumes of distilled water.

It is difficult to estimate the importance of this new work. It lays bare practically a whole new field for experimental attack on many of the most fundamental problems in biology and the medical sciences. For example, as Carrel states, the artificial growth of such glands as the thyroid may be the means of attacking the problems concerned with the various internal secretions; and the extension of such work as Ruth has inaugurated may lead to the possibility of artificially hastening the repair of surgical wounds. The importance of the work from the standpoint of the cancer problem is obvious.

THE ADVERTISERS' PROTECTIVE ASSOCIATION

Probably every newspaper and magazine in the United States has received, within the last week or ten days, a circular letter from an organization calling itself the "Advertisers' Protective Association" or, more briefly, the "A. P. A." No office address is given, but merely a post-office box number in New York City. The secretary of this association is Frederick W. Hooper, who asserts that this organization "is composed of manufacturers of foods, beverages and drugs, representing an investment of $400,000,000.00, whose advertising expenses are annually over $100,000,000.00." The circular letter is addressed "Dear Mr. Editor," and the opening paragraph reads:

> "During the past five years, the Bureau of Chemistry of the Department of Agriculture, has made a number of very vicious and uncalled-for assaults on foods, beverages and drugs, greatly to their injury, as well as *damaging to the Press which has been carrying the advertising contracts in these lines.* Many publications have, no doubt, felt the effect of these assaults *by a reduction in amount of advertising patronage from the manufacturers of* foods, beverages and *patent medicines.* We are, therefore, presenting the following facts, to show why the earning power of your publication has been, or will be, diminished in these lines, unless these attacks are stopped." [Italics ours.—Ed.]

Then follows a scurrilous attack on Dr. Wiley, chief of the Bureau of Chemistry, because of his activity in repressing frauds in foods and drugs. The implication is made that Dr. Wiley was rewarded by the Kentucky whisky distillers because he fought the vile concoctions that are frequently sold as whisky; that he got some material benefit from Heinz, the pickle manufacturer, for his attitude against the use of sodium benzoate and, finally, that "in the fight on proprietary medicines, the American Medical Association, better known as the 'Doctors' Trust,' furnishes the sinews of war." The Advertisers' Protective Association tells the papers:

> "If this condition of affairs is not changed, *it will result in greatly cutting down the support you receive from the manufacturers of* almost numberless Foods, Beverages and *Proprietary or Patent Medicines,* and the question presents itself: Will you and your influential paper stand for such a condition? We think not!" [Italics again ours.—Ed.]

The papers are then instructed: first, to bring pressure to bear on the Secretary of Agriculture and their congressmen and senators to curb the activities of the Bureau of Chemistry; second, "to take the matter up in the editorial columns" of their papers and show how Dr. Wiley is "squandering" the people's money "to advance the interests of . . . his particular friends." The letter closes by again urging the papers "to let your senators and your congressmen know your attitude in this matter," and it promises that if this is done "you will be rewarded . . . by an improvement in your [advertising?] business."

It is evident that the "Advertisers' Protective Association" is but a new alias for the "patent medicine" interests. Apparently, this circular is a final desperate attempt on the part of the nostrum-makers to retain their grip on the press of the country. It remains to be seen whether the American newspaper editor will jump at this crack of the whip or whether he has emancipated himself from the thraldom of "patent medicine" slavery.

It is significant that this wide-spread attempt to control the editorial policy of the newspapers of the United States by the promise of bribes in the form of advertising contracts should have been made at this time. In *Collier's* excellent series by Will Irwin on "The American Newspaper" the influence of the advertising department over the editorial policy of newspapers was being discussed at about the same time that the "A. P. A." sent out its circular letter.

We shall watch with interest the attitude of the press of the country in this matter. Will it maintain a "conspiracy of silence" and refuse to publish any matter that, while of vital interest to the public, may be inimical to the interests of its advertisers? Will it go further and aggressively attack the admirable work that has been and is being done by the Bureau of Chemistry? We believe that it will do neither, but that it will assert itself as a free press should and, by exposing the methods of the "patent medicine" fakers and their attempt at intimidation and bribery, retain the prestige and influence which some of our American newspapers seem to have lost.

INACCURACY IN THYROID MEDICATION

Attention has again been called to the inaccuracy which characterizes much of the thyroid medication. In a recent publication, Beebe[1] discusses especially the wide variations in the iodin content of the thyroid most frequently used for medicinal purposes (that of the sheep), and advocates the use of an extract containing a standard amount of iodin.

There can be little doubt that the therapeutic efficiency of thyroid is largely determined by the iodin content, although, as Hunt and Seidell[2] pointed out three years ago, the clinical evidence for this, while very convincing so far as it goes, is not extensive. These authors found that the iodin content of most of the commercial dry thyroids on the American market ranged between 0.1 and 0.2 per cent. and suggested that it would perhaps be desirable to fix a standard of not less than 0.12 per cent. iodin for the official preparation. Since that ime one firm has adopted a standard of not less than 0.2 per cent. and it is quite probable that the standard suggested above is too low. Whether, however, a standard as high as 0.2 per cent. for sheep thyroids would be feasible in this country seems open to doubt; with one exception the normal fresh sheep thyroids, the analyses of which are reported by Beebe, fell below 0.04 per cent. (which is equivalent to about 0.2 per cent. in the dried gland). There would probably be no difficulty in maintaining a standard of 0.2 per cent., however, if manufacturers were permitted by the Pharmacopeia to use the thyroids of hogs and beeves; according to the analyses both of Hunt and Seidell, and of Beebe, the thyroids of these animals contain a higher average of iodin than do those of the sheep.

Beebe suggests that if an extract containing a definite amount of iodin were adopted the question of the source of the material would become unimportant. It is a question, however, whether it is desirable still further to complicate the present situation by the introduction of special preparations, and whether the dried gland with a more definite percentage of iodin would not meet most needs. At least one extract, apparently practically identical with that proposed by Beebe, but with a smaller percentage of iodin, has been on the European market for many years, but does not seem to have proved distinctly more satisfactory than the dried gland.

Although the varying amounts of iodin in the thyroid preparations constitute an important element in the inaccuracy of thyroid medication, a far more general source of inaccuracy is the uncritical way in which thyroid tablets are used. It may be that the tablet is the best and most convenient form of administering the drug (if the tablet is well chewed), but the use of tablets has led to great confusion and haziness as to dosage. This results in part from the fact, as pointed out by Hunt and Seidell, that different manufacturers express the weight of their tablets on different bases. Thus one firm's "5-grain tablet" means a tablet weighing 5 grains, but containing 2 grains of dried thyroid, or the equivalent of 10 to 14 grains of the fresh gland; another firm's "5-grain tablet" means a tablet containing dried thyroid equivalent to 5 grains of the fresh gland, etc. A still more confusing practice, which unfortunately has become very prevalent among physicians, is that of speaking of unspecified "tablets." A physician of some experience can frequently, although by no means always, guess at the size of the tablet meant, but the possibilities of error are obvious from the following example: One firm lists tablets of various sizes ranging from ½ to 5 grains, meaning that the tablets contain dried thyroid equivalent to from ½ to 5 grains of the fresh gland. As 1 part of the dried gland represents from 5 to 7 parts of the fresh gland, the weakest of these tablets contain but about 1/10 of a grain of the dried gland. A 2-grain "tablet" of one of the firms which base the weight on the amount of dried gland would thus contain twenty times as much of the drug. When it is further considered that the thyroid in some of these tablets contains four times as much iodin as that in other tablets, which presumably makes it four times as active, it is evident that one "tablet" may have the physiologic effect of eighty other "tablets." Although it is improbable that such extreme confusion happens often (the weakest tablets being prepared usually for special purposes), there is a distinct possibility of its occurrence.

Of course such a condition of affairs as to the dosage of a powerful drug like thyroid would ordinarily be intolerable, but the redeeming feature is that thyroid medication must of necessity be peculiarly individual; the correct dose is determined by the degree of thyroid deficiency to be met, and this can be determined only by repeated trials. But after the correct dose has been determined it is highly desirable that treatment be continued with a preparation of uniform activity; this is especially important if the treatment is to continue for months as is sometimes necessary.

These difficulties would be obviated if physicians would always base their dosage on the preparation of the Pharmacopeia; a further improvement would undoubtedly be the adoption by the latter of a standard iodin content.

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[1] Beebe: Am. Jour. Pharmacy, 1911, p. 56.

[2] Hunt and Seidell: Hyg. Lab., Bull. 47, U. S. P. H. and M.-H. S., 1908; The Journal A. M. A., Oct. 24, 1908, p. 1385.

THE EMASCULATED FOOD AND DRUGS ACT

The federal Food and Drugs Act, under the interpretation recently given it by the Supreme Court of the United States, has become practically a dead letter so far as it affords protection against the fraud and cruelty connected with the exploitation of "patent medicines." As was noted last week, the court has decided that the national pure food law does not prohibit false statements on labels or medicines so long as such statements are confined to curative effects and not to composition. To the average quack and "patent medicine" vender, such an interpretation will prove a priceless boon.

It should be borne in mind that the Food and Drugs Act does not require the composition of any "patent medicine" to be printed on the label; it does not even require the presence of any but a very few of the most powerful and dangerous drugs to be made public. A preparation may contain strychnin, prussic acid, arsenic or any one or more of a hundred equally dangerous and violent poisons and no mention need be made of the fact on the label. The "patent-medicine" faker cares little about restrictions regarding the composition of his nostrum; all he asks is permission to make any assertion that he sees fit regarding the curative effect of his preparation. The Supreme Court's decision means that that permission now exists under the federal Food and Drugs Act.

A weak solution of sugar or common table-salt in water, or for that matter a bottle of plain water, may now legally be labeled:

CANCEROID
A Positive and Never-Failing Cure for Cancer, Tuberculosis and All Other Diseases
Guaranteed by Dr. Quack Under the Food and Drugs Act.

Such a label, while a tissue of lies, is not illegal under the present pure food law. Hundreds of nostrum venders, when the Food and Drugs Act went into effect, had to discard their "sure-cure" labels because Dr. Wiley held that the law prohibited lying "in any particular." Now they can resurrect their old stock and send out their preparations labeled with the same unblushing falsehoods that were so common before the advent of the pure food law. Every "cancer-cure" faker, every "consumption-cure" swindler, every medical humbug of any kind or description can now resume his miserable trade with a feeling of perfect security, providing he is careful to make no misstatement regarding the composition of his wretched fraud. And he is not required to say a word about the composition of his nostrum unless it contains alcohol, morphin, acetanilid or one of the other eleven drugs or their derivatives that are specifically mentioned in the act!

From what has been said, it is evident that an amendment to the Food and Drugs Act is imperative. The law was passed, after years of opposition on the part of food dopers and "patent medicine" fakers, for but one object—the protection of the public health. As it now stands it fails to protect the public in a most vital particular, namely, against the cruelly fraudulent claims of the "sure-cure" school of swindlers. The law should be changed at the very earliest moment so that it shall specifically prohibit *every kind* of false statement regarding foods or medicinal preparations. The amendment, moreover, should be broad enough to prohibit lying regarding medicines and foods not only on the labels, but also in all advertising matter dealing with these special products.

SOME CONSIDERATIONS REGARDING THE USE OF DIPHTHERIA ANTITOXIN

There is no difference of opinion among unprejudiced observers as to the great life-saving value of diphtheria antitoxin. Carefully prepared and impartially analyzed statistics show that the average mortality from the disease prior to the introduction of the antitoxin as a therapeutic measure has been reduced one-half or more under the employment of this agent. In addition, the duration of the individual attack is shortened and its severity lessened. Among other things, unpleasant sequels, such as the paralysis resulting from peripheral neuritis, have become less frequent. Moreover, through the employment of prophylactic injections the spread of the disease has been checked and in numerous instances local epidemics have by the same means been brought to an end.

It was recognized even early in the history of the treatment that the procedure was not unattended with possibilities of danger. Perhaps the first death in the sequence of an injection of diphtheria antitoxin was that of the child of a German physician. The cause of the untoward result in this case, as well as in others that have since been reported, is involved in some obscurity, although it was supposed to reside in the condition of lymphatism, attended with persistence of the thymus gland and hyperplasia of lymphatic structures in various parts of the body. Less severe complications, such as articular swelling and pain, cutaneous exanthemata and other constitutional phenomena also have been observed. These have been referred to the serum in which the antitoxic principles are contained. The reactions noted are at the present time comprehended in the term "anaphylaxis," and are looked on as expressions of hypersusceptibility to specific protein substances. The phenomenon has been carefully studied by numerous investigators, and much has been learned with respect to its occurrence, but no satisfactory means of preventing it has yet been discovered.

Next in importance to the acceptance of the specific therapeutic value of diphtheria antitoxin is its early routine employment, for it has been demonstrated beyond question that the good results from its use are directly proportionate to the promptness with which it is administered. As the antitoxic principles are themselves innocuous, there is no rigid limitation as to the dosage of the serum apart from the effect to be secured. Accordingly, the practitioner has no choice in the presence of a case of actual diphtheria. When, however, the nature of the disease is doubtful or merely suspicious, or in case of exposure to infection, there may be a question as to the wisdom or the necessity of injecting antitoxin, in view of the possibility of unforeseen complications developing. An interesting discussion of this phase of the subject is presented by Dr. E. W. Goodall[1] in a recent communication based on an experience with diphtheria for eight years prior to the introduction of the antitoxin treatment and for the sixteen years that have elapsed since. As he points out, the symptoms due to the serum itself, consisting of fever and rash—urticaria or erythema—and observed as well when similar treatment is employed in cases of tetanus, streptococcus infection and typhoid fever, occur in about 35 per cent. of the cases, while in 3 or 4 per cent. there occur also articular manifestations of an inflammatory character. These phenomena set in from one to three weeks after the injection. While unpleasant, they are unattended with danger, and they constitute no contra-indication to antitoxin treatment. In other cases, however, particularly when a second injection is given, the symptoms attain a greater degree of severity, and they may set in after the interval mentioned or after a shorter interval—from twelve hours to six days—or even within a still shorter interval—from a few minutes to six hours. In addition to the rash, which may involve a large area of the cutaneous surface and probably mucous membranes also, the temperature becomes elevated, the skin cyanotic and rigors occur. There may also be collapse or convulsions and drowsiness. These phenomena develop, however, only when the second or subsequent injection is given later than ten days after the preceding one. In one instance the interval was as long as seven and one-half years. On the other hand, the reaction does not appear in every case of reinjection. In yet a small number of cases grave symptoms—intense dyspnea, with failure of respiration and collapse—appear after a primary injection of serum. Many of the patients in this group have been sufferers from asthma or some allied disorder or possess an idiosyncrasy to horses.

Therefore, great care and discrimination should be exercised in the prophylactic administration of diphtheria antitoxin. Not only may a person so treated prove hypersensitive, but he would be rendered so in the event of a subsequent injection becoming necessary for remedial purposes. In cases of doubt or suspicion antitoxin treatment should be given only when the larynx is involved. In cases of undoubted diphtheria, antitoxin should be administered without delay or hesitation except in the presence of asthma, and then a decision will have to be reached from the gravity of the symptoms. The earlier the treatment is instituted the smaller will be the dose required and the less, therefore, the danger of reaction.

VOLUNTARY CLOSING OF MEDICAL COLLEGES

Out of the ten medical colleges in Missouri, the University Medical College of Kansas City was one of four which were listed among acceptable (Class A) medical colleges by the Council on Medical Education in its classification published last year. The position of this school has been maintained under many difficulties, dependent as it was on the tuition fees received from its students supplemented by gratuitous services and personal sacrifices on the part of its faculty. And now the trustees and faculty have decided to close the doors of the college permanently at the end of the present session. According to a statement published elsewhere in this issue—a statement which should be read by all who are interested in medical education—the college was closed in recognition of the marvelous progress which has been made in medical science in the last quarter of a century; a progress that has made necessary not only higher preliminary qualifications for those who are to study medicine, but also the possession by the medical college of thoroughly equipped laboratories, of more extensive clinical facilities and of a corps of teachers—trained specialists in their various subjects—some of whom, at least, must devote their entire time to teaching and to research.

The faculty fully realized that an increase in the standards of admission would mean a reduction in the number of students and a corresponding reduction in the already seriously limited income of the medical school; nevertheless, at the beginning of this its last session, a higher entrance requirement, a year of college work, was made effective. To make other needed improvements, to obtain the additional laboratory equipment and the expert instructors, it was recognized that funds from some source aside from students' fees were absolutely essential. A larger enrolment of medical students and a greatly increased tuition fee, which might have enabled the college to make the desired improvements, were out of the question since there continued to exist many less particular medical colleges which were ready to accept students with almost any preliminary education. After a long and fruitless effort to secure the needed funds, therefore, the trustees and faculty of the University Medical College preferred to close the doors and to retain the college's good name rather than to continue it other than as a first-grade and an honorable school.

But while honor is due to the men who are willing thus to sacrifice their personal interests and ambition in order that the future physicians may be well educated, it is to be regretted that one of the medical schools of the better grade is thus closed while scores of schools much inferior to it continue to exist. The faculties of the latter schools will probably welcome the closing of this conscientious competitor, since, of course, they will gain in numbers—and dollars—thereby. These inferior schools will doubtless continue to sing their own praises and to accept the fees of unqualified students so long as inadequate or unenforced legal requirements will permit. Medical colleges of the better class may be depended on to keep abreast of the progress in medical education or voluntarily to close their doors; those that are purely commercial will continue in the old rut. It is high time, not only that medical students should be warned regarding the handicap that goes with a diploma from a low-grade medical school, but also that the public should be safeguarded against the ill-trained output of these institutions.

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[1] Goodall, E. W.: Brit. Med. Jour., Feb. 11, 1911, p. 292; abstr. in The Journal, March 11, 1911, p. 779.

Current Comment

PUBLIC PARKS AND THE PHYSICIAN

The value of public parks and playgrounds to the great mass of city dwellers is now generally recognized, but in the rapid growth of our cities timely provision for parks is usually overlooked until business and material interests have so much encroached on the available spaces that their conversion into parks is so expensive as to be almost prohibitory. As a consequence, these lungs of the cities are, too often, utterly inadequate. While it is true that the health of the workers in a city is one of its most valuable assets from a purely material point of view, as conducing to efficiency and increased output, yet it is a matter of slow and difficult progress to bring the business portion of the community to realize the direct importance of a matter, which, at first sight, seems to affect them so remotely. The movement for parks and playgrounds belongs to preventive medicine, in the modern conception of that subject. It is, therefore, the opportunity and the duty of the physician, as a public-spirited citizen, to exercise foresight in this matter, and to use his influence in securing adequate parks, playgrounds and breathing-spaces for the people. Physicians have not been entirely remiss in this matter; on the contrary, in many places they have been the leaders in this work, as they should be everywhere. Many American cities have realized the value of parks and playgrounds and have spent large sums of money in providing them. Some are splendidly equipped in this respect; so much so that in the recent meetings in Europe, concerning the town-planning and city beautification movement, some of our cities were cited as models to be imitated by the older urban centers of Europe. Berlin is one of these cities that has recently taken up the matter of providing a system of forest reserves or parks just outside the city, as well as several within the city limits, to give greater opportunity to the people for outdoor air, exercise and recreation—a *receptaculum oxygenii*, as they have been termed. The chairman of a committee having in charge this park promotion enterprise in Berlin recommends that the physicians, with the architects, should be the leading spirits in the hygiene of the masses, and says that it is a matter of reproach that millions are spent on sanatoriums for the treatment of tuberculosis, while no adequate provision is made for giving the masses the air and light and opportunity for recreation which would largely help to prevent the condition which these sanatoriums try to cure at such great expense.

THE DOMESTICATED SERPENT VERSUS THE DOMESTIC CAT

The domestic cat has been sentenced to banishment by the modern hygienist because of the alleged fact that she harbors germs in her long hair and is subject to diphtheria and, perhaps, other infectious diseases which may be communicated to human beings, chiefly the children who play with her. The faithful dog, particularly the house-dog, with his long hair and his repertoire of wheezes and distempers, due largely to too much pampering, is also under suspicion. Thus, two of our most cherished and time-honored associations are threatened by the ruthless hand of science. The faithfulness and cheerful companionship of Fido, and the purring domesticity of Tabby are to weigh as nothing against the teachings of preventive medicine. The alleged rat-killing habit of the cat, even in the face of the demonstrated fact that rats convey plague, is not to be considered as a mitigating circumstance in her favor. Professor Sambon, a London authority on tropical diseases, including the various forms of plague, is against the cat and suggests a substitute rat-catcher and vermin-exterminator in the form of a wriggling, gleaming, non-venomous snake. He cites history in support of his contention that the snake is the proper substitute for the cat. He calls attention to the ancient practice in Egypt and elsewhere of keeping domesticated snakes to rid the premises of vermin and suggests the revival of this practice for the extermination of rats. The snake has no long hair; he is, in consequence, alleged to be somewhat more hygienic. And, indeed, in some tropical and semitropical countries to-day, snakes are tolerated, if not domesticated. The value of snakes in ridding the fields of rats and mice which destroy the farmer's grain was referred to in an editorial on birds[1] last week. We are reminded that the caduceus with the twining serpents has constituted the symbol of medicine from the time of Æsculapius, or even before, and is a recognition of the sanitary significance of the snake. Can it be that in this day of the turning topsy-turvy of many traditions the despised snake is coming into his own again, and that the modern science of hygiene and sanitation will accord him his ancient and honorable place in medicine? Are we to say, *Vale* the infectious cat and dog, and *Salve* the snake?

THE WHITE RACE IN THE TROPICS

The evidence given by Dr. Gorgas of the healthfulness, under proper sanitation, of the tropics for white men is supported by that of Dr. Victor G. Heiser, chief of the health department in the Philippines. He finds the death-rate there among government employees for the past year to be at the astonishingly low figure of 5.82 per thousand. Even after allowing for the selected character of the employees and the absence of young children and very old people among them, this rate, he says, is still lower than that of the civilian population of any other tropical country. He also adds that, in his opinion, if the simple essential rules of hygienic living were more closely observed the death-rate could be still further lowered. It has been said that Americans tend to become enervated and lazy in tropical countries, but this has been contradicted. It is asserted by others that a reasonable amount of active exercise under proper conditions is as essential to health in tropical as in temperate regions. These facts and views are not in agreement with those expressed by Woodruff and others, who hold that the white race necessarily degenerates in hot regions and is at its best only in a cool and cloudy climate. However this may be, it must be admitted that the tropics have not been fairly tried by the white race. In the past this was impossible, as we have only lately acquired some of the more important data needed to guide us in our utilization of tropical regions. One point may be mentioned, however, on which there is still some difference of opinion: this is the need of alcohol as a protection against some of the dangers incurred in those regions. There has been a rather wide-spread notion, which is still somewhat supported by medical authority, that the moderate use of alcoholic drinks is a prophylactic against some tropical diseases. The best authorities, however, give this notion little support. A recent German writer (Riegel), summing up the data from the military history of operations in tropical and subtropical countries, emphatically condemns the use of alcohol in any expedition in tropical regions. Many white men carry drinking habits into warm countries or acquire them there under the impression that alcohol is a defense against the deteriorating effects of the climate. With our more recently acquired knowledge of tropical diseases many of the old arguments in favor of its use certainly fail. The idea of the general deterioration of the white race in warm countries will possibly become as obsolete as those formerly held concerning many of the tropical diseases have become. Even the so-called tropical neurasthenia may prove to be avoidable. Then, if we realize our sanitary ideals, the pressure of population, as Dr. Gorgas has pointed out, will demand the full utilization of these most productive portions of the earth.

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[1] Our Vanishing Shore-Birds, The Journal A. M. A., June 3, 1911, p. 1658.

PANAMA AN OBJECT-LESSON TO CIVILIZATION

The report of the Department of Sanitation of the Isthmian Canal Commission for the month of March, just issued, indicates that the Canal Zone, formerly swept by disease and pestilence but now policed by Colonel Gorgas and his sanitary inspectors, is as safe a place as any on earth for a white man or woman to live. During the month of March, there were only forty-three deaths from all causes among 47,935 employees. Sixteen of these deaths were from violence, and twenty-seven were from disease. Of these victims twenty-three were colored and four were Italian or Spanish. Not a single white American man died of disease. Still more striking are the figures for white employees and their families from the United States. In this class, there are, at present, 10,299 persons in the Canal Zone. Out of this number, equivalent to the entire population of an average American city, there were only ten deaths. Of these, three white employees from the United States, out of a total number of 6,017, died as the result of accident; none died as the result of disease. Out of 4,282 white women and children from the United States, there were only seven deaths. An analysis of the causes of these deaths is especially instructive. One woman, aged 81, died of chronic nephritis. One infant lived only two and a half hours, as the result of premature birth; three women, aged 22, 27 and 41, died as the result of complications due to pregnancy. All of these deaths can be regarded as, in a measure, unavoidable. Only two cases of death of white Americans from preventable disease remain; one woman, aged 32, and one child, aged three years, both of whom died of pneumonia. And this out of a total number of white women and children of over 4,000 and a total number of white Americans of over 10,000. Has any such record in the elimination of disease ever before been established or even dreamed of? The present population of the Canal Zone, is, it is true, composed of young, vigorous and carefully selected persons, and some allowance must be made for this fact. Yet as good results can be secured in any community in the United States, if the intelligent, painstaking, scientific methods followed by Colonel Gorgas and his subordinates are only adopted. If the Panama Canal should serve no other purpose than that of an object-lesson in sanitation, it will be worth to the United States and the civilized world far more than its total cost. The world has been shown that preventable disease is the result of ignorance and indifference and that in view of our present knowledge of the causes and methods of prevention of disease its continued existence is discreditable to modern civilization.

Medical News

CALIFORNIA

Medical Officers Entertained.—On May 18 the San Diego County Medical Society and the Physicians' Club of San Diego entertained the medical officers of the army and navy, on duty at and near San Diego, at an informal smoker at the University Club.

Personal.—Dr. Robert O. Moody, San Francisco, associate professor of anatomy in the University of California, has been given leave of absence for the first half year.——Dr. J. G. Fitzgerald has been appointed associate professor of bacteriology in the University of California.——Dr. Lyman H. Case, Santa Monica, who has been seriously ill with inflammatory rheumatism, is reported to be improving.——The house of Dr. Joseph K. Swindt, Pomona, was destroyed by fire, May 20, with a loss of $6,000.

COLORADO

Medical Institute Caught.—The Dr. Rhodes Institute, Denver, an advertising concern, and "Dr." Richard J. Brown, connected with the institute, are said to have been declared guilty of fraud and ordered to pay damages of $4,000 to S. A. Combs by the district court May 26. It was alleged that Combs had been treated by Dr. Brown for hernia by paraffin injections.

Mortality of 1909.—According to Bulletin 108 of the State Board of Health, there was a slight increase during the year in the death-rate which is due, probably, to the increased number of tuberculous patients who have gone to Colorado in an advanced stage of the disease. The highest mortality at all ages occurred in March, and the lowest in June. Both of these agree with the figures for the entire registration area.

Children's Pavilion at Children's Hospital.—The Children's Pavilion Association of the Denver County Hospital has abandoned the plan of having a pavilion in the grounds of the County Hospital and will unite with the Children's Hospital Association. The hospital will be enlarged and will receive, at the expense of the county, all children who would otherwise be sent to the County Hospital. The association cleared $1,300 for its Easter ball.

DISTRICT OF COLUMBIA

Tuberculosis Camp Opened.—The Red Cross Tuberculosis Day Camp was opened May 2 and four tents have been erected and fitted up for the accommodation of additional patients. The camp is being operated under the auspices of the District of Columbia Red Cross Chapter. During last year more than eighty patients were admitted to the camp.

Supervisors Sued.—The District of Columbia Medical Board of Supervisors, which has the power of granting licenses to practice medicine, has been sued for reciprocal license by Dr. Thomas V. Hammond who claims reciprocal license by reason of a license he holds from the State of Maryland. The board is said to be exceedingly careful in the matter of issuing licenses as there are at present more than 1,500 physicians registered in Washington, all of whom are supposed to be engaged in active practice.

ILLINOIS

Tag Day in Lake County.—Lake County celebrated its annual tag day, June 3. The proceeds, estimated at about $5,000, will be divided between the Lake Bluff Orphanage, the Lake County Tuberculosis Institute (which maintains a tent colony), and the Jane McAlister Hospital, Waukegan.

Personal.—Dr. Robert S. McCaughey and family, Hoopeston, have sailed for Europe.——Dr. Charles True, Kankakee, is reported to be seriously ill as the result of cerebral hemorrhage.——Dr. Harry S. Oyler, Lincoln, sustained painful injuries in a runaway accident, in which his buggy was demolished, May 27.——Dr. Lewis H. Skaggs, Ellsworth, is reported to be seriously ill.

Chicago

Personal.—Dr. Frank Edward Simpson has returned from abroad.——Dr. Duncan B. McEachern has been appointed temporary superintendent of the Contagious Disease Hospital.——Dr. Rudolph Vlach sailed for Europe, May 30.

Gradle Memorial Collection.—The extensive private medical library of about 5,000 volumes, collected by the late Dr. Henry Gradle, has been presented by Mrs. Gradle and her children to the trustees of the Crerar Library and will be known as the Henry Gradle Memorial Collection.

Hyde Memorial Services.—Services in memory of Prof. James Nevins Hyde will be held in the upper amphitheater of Rush Medical College, June 12, at 11 a. m. The medical profession is invited to participate in these services. The memorial address will be by Dr. J. B. Herrick.

Another Tuberculosis Hospital.—At a meeting of the Jewish Consumptive Relief Society, recently, it was decided to erect a tuberculosis hospital to cost $75,000. A sinking fund of $3,000 has been set aside and on June 4 a vaudeville performance is to be given at the Colonial for the benefit of this worthy charity.

Intern Examination.—The deputy warden of Cook County Hospital states that the figures as given in the news item in The Journal of May 27, regarding the result of the intern examinations were incorrect, and that, of the first fifty places on the eligible list of interns of Cook County Hospital, Northwestern University Medical School received 17, Rush Medical College 16, the College of Physicians 10, Bennett Medical College 6, and the Chicago College of Medicine and Surgery 1.——One hundred and seventy women physicians of Chicago gave a dinner, June 1, to the three women who passed the recent examinations for interns at Cook County Hospital.

The New Health Commissioner.—Mayor Harrison has selected Dr. George Bright Young, United States Public Health and Marine-Hospital Service, as health commissioner of Chicago, succeeding Dr. William A. Evans, who has made so distinguished a record in that office. The mayor's choice meets with general approval. Dr. Young was born in New Orleans, May 12, 1860. In 1870 his family moved to Charlottesville, Va., where he received his academic education at the University of Virginia. He took the first year of his medical course at the University of Virginia and completed it at the University of Maryland, Baltimore, from which he graduated in 1887. Jan. 30, 1890, he entered the United States Marine-Hospital Service as Assistant Surgeon; in 1894 he was made Passed Assistant Surgeon, and, on Dec. 10, 1905, was promoted to Surgeon. Dr. Young has an enviable record of service. For three years he was in charge of the national quarantine at Delaware Breakwater. During the prevalence of cholera in Europe in 1893 Dr. Young was one of the officers sent by the service to take charge of the shipment of emigrants and cargoes from the various ports. He had charge of all traffic from Southern Italy and the Island of Sicily, with headquarters at Naples. This duty continued for about a year. One of its results was to demonstrate the sufficiency of the national quarantine regulations, for it so happened that while vessels were leaving for United States, other vessels of exactly the same character and carrying passengers and cargoes of identical origins were leaving for various ports in South America, and while not a case of cholera developed on any vessel from Naples after the regulations were put in force, every vessel not handled by Dr. Young had severe outbreaks of cholera and lost from 25 to 200 passengers. During the yellow fever outbreak in 1897 he had charge of interstate quarantine in portions of Tennessee, Mississippi, Alabama and Arkansas, at which time he established the first extensive system of train inspection. In 1898 he was detailed in the office of the surgeon-general for duty in connection with the supervision of the general quarantine operations of the service during the epidemic of that year. In 1905 he had charge of the operations of the service in a considerable portion of the South, including the supervision of the work done during the outbreaks in Natchez, Miss., Lake Providence, La., and Hamburg, Miss., and the interstate quarantine controlling train inspection and similar matters in a territory embracing nearly all of Mississippi, portions of Louisiana, Alabama, Tennessee and Kentucky. During the past six years Dr. Young has been stationed in Chicago where he has been active in sanitary work, in addition to his service as superintendent of the U. S. Marine Hospital. For several years he has been a member and is now president of the Lake Michigan Water Commission, he was a member of the City Milk Commission and is a member of the City Club's committee on insect pests. He has represented the United States Public Health and Marine-Hospital Service in the House of Delegates of the American Medical Association for the last four years, and in its Council on Medical Legislation and Council on Medical Education. The appointment of Dr. Young is an augury for efficient service, unhampered by political pledges or promises.

INDIANA

Hydrophobia Fund.—More than $1,200 has been accumulated by the auditor of the state for the care of indigent persons affected with hydrophobia. The last legislature passed an act providing that 5 per cent. of the surplus dog fund in every county should be turned over to the state for this purpose.

Personal.—Dr. Nelson J. Shook, Kendallville, fractured his clavicle and was painfully cut about the face and hands by the overturning of his automobile while making a professional call, May 27.——Dr. Charles L. Dreese, Goshen, was attacked by an insane patient, May 22, and seriously injured.——Dr. William H. Johnson, Indianapolis, who has been seriously ill, is convalescent and has resumed practice.

IOWA

The State Society.—Dr. Lawrence W. Littig, Davenport, was elected president of the Iowa State Medical Society at the last meeting. Dr. William B. Small, Waterloo, the treasurer, was reelected, and Dr. Granville N. Ryan, Des Moines, is the new trustee, Dr. Thomas E. Powers, Clarinda, holding over.

Woman's Hospital Planned.—The Iowa State Association of Medical Women and the City Federation of Women's Clubs of Des Moines plan the establishment of a hospital for women in Des Moines. The clinic maintained during the last year for women and children has been far more successful than was expected and the necessity of a hospital to give care exclusively to women and children not able to pay for the regular hospital care is apparent.

LOUISIANA

State Society Meeting.—The thirty-second annual meeting of the Louisiana State Medical Society was held in Shreveport, May 30-June 1, under the presidency of Dr. Edwin J. Graner, New Orleans. New Orleans was selected as the place of meeting for 1912 and the following officers were elected: president, Dr. Richard O. Simmons, Alexandria; vice-presidents, Drs. James C. Willis, Shreveport, Benjamin A. Ledbetter, New Orleans, and E. Otis Edgarton, Arcadia; secretary, Dr. Joseph Denegre Martin, New Orleans (reelected); treasurer, Dr. Charles C. Bass, New Orleans (reelected); delegates to the American Medical Association, Drs. Charles Chassaignac, New Orleans, and Oscar Dowling, Shreveport, and alternates, the secretary and Dr. Robert H. Blackman, Monroe.

MARYLAND

Hospital Changes Hands.—The sisters of charity have purchased for $26,000 and taken possession of the Allegheny Hospital, Cumberland. The capacity of the institution will be doubled.

Personal.—Dr. Jeptha E. Pitsnogle, Hagerstown, has been appointed health officer and Dr. William D. Campbell assistant health officer of Washington County.——Drs. Thomas C. Bussey, Texas, and Frank H. Ruhl, Lansdowne, who recently had cerebral hemorrhages, are reported to be improving.

Psychiatrists for Social Service Work.—The Maryland Psychiatric Society is raising a fund of $2,500 to employ a trained psychiatrist to do social service work. This will embrace efforts for the prevention of insanity and for the after-care of those discharged as cured. He will visit state hospitals and study the patients. He will also visit the homes of discharged patients and endeavor to find suitable occupations for them. The society is preparing the first issue of a publication to be known as "The Maryland Psychiatric Quarterly."

Baltimore

Addition to Institution.—A large addition is to be made to Mount Hope Retreat, a private institution for nervous and insane patients, under the care of Roman Catholic sisters. Two additional wings are to be built, two stories high, and the improvement will cost about $90,000.

Personal.—Dr. Julius W. Schlieder is reported to be seriously ill with septicemia, due to an operation wound.——Dr. John McF. Bergland is to be resident physician at Biddeford Pool, Me., this summer.——Dr. William Simon, Catonsville, is convalescent after typhoid fever.——Dr. Lewellys F. Barker has recovered from his recent operation and resumed practice.——Drs. Hugh H. Young, Emil Novak and Anton G. Rytina will spend the summer abroad.——Drs. Leo J. Goldbach and Herbert E. Laroque have sailed for Europe.

MASSACHUSETTS

Personal.—Dr. John M. Martin, Boston, has been appointed a school physician vice Dr. John L. Ames.——Dr. Albert M. Dunlap has been appointed a member of the faculty of Harvard Medical School recently established at Shanghai, China, and will sail for his new post of duty this month.

County Medical Society Meeting.—Hampshire District Medical Society held its annual meeting in Northampton, May 12. Dr. George B. Shattuck, Boston, president of the Massachusetts Medical Society, delivered an address on the work of that organization. Dr. Nelson C. Haskell, Amherst, was elected president; Dr. Maurice W. Pearson, Ware, vice-president; Dr. Albert M. Belden, Northampton, secretary; Dr. Justus G. Hanson, Northampton, treasurer, and Dr. William J. Collins, Northampton, librarian.

New Hospital.—Plans have been perfected by many physicians and business men of Boston to supply that city with a large private hospital providing the best of medical treatment to patients willing to pay for private rooms and special care. The hospital will be incorporated with a capital stock of $500,000 and the board of directors includes the following physicians: Drs. Arthur T. Cabot, William T. Councilman, Reginald H. Fitz, Joseph L. Goodale, Francis B. Harrington, Henry Jackson, Robert W. Lovett, John L. Morse, Edward Reynolds, Maurice H. Richardson, Frederick C. Shattuck, Edward W. Taylor, Paul Thorndike and John Collins Warren.

MICHIGAN

Names School for Physician.—One of the two new grade schools of Pontiac is to be known as the John P. Wilson School in honor of the practitioner of that name who was one of the prominent men of the city during and after the Civil War.

Antituberculosis Societies.—Dr. Fred R. Waldron has been elected president of the Ann Arbor Society for the Prevention of Tuberculosis, vice Rev. Carl S. Patton, resigned. It was reported that there are now three patients at Camp Lookout and it was decided to hold an annual tag day during the last week in October.——The organization of the Adrian and Lenawee Antituberculosis Society was perfected at a meeting held, May 24. Dr. Esli T. Morden was elected secretary-treasurer of the Association.

Personal.—Major John V. Frazier, Lapeer, has been detailed to the maneuver camp at San Antonio.——Dr. Elizabeth M. Hooper, Port Huron, was the guest of honor at a dinner given in Des Moines by the examiners of the Ladies of the Maccabees, April 29.——Dr. Philander B. Wright has resumed practice at Grand Rapids after an absence of three years.——Dr. David Ralston has been appointed health officer of Cadillac for the eighth consecutive term.——Dr. and Mrs. Periam B. Hardy, Tecumseh, sailed for Vienna, June 24.——Dr. Enoch M. Mather, Detroit, was painfully injured in a collision between his motor car and a trolley car, May 18.——Dr. John H. DeMay has been elected health officer and Dr. Roy W. Chivers secretary of the Board of Health of Jackson.

MISSOURI

State Tuberculosis Board Meeting.—At the annual meeting of the State Board for the Prevention of Tuberculosis, held in Jefferson City, May 31, the following officers were elected: Dr. Herman E. Pearse, Kansas City, president, and Drs. R. M. Funkhouser, George W. Heuman and James Stewart, St. Louis, Edward W. Schauffler, Kansas City, Gustave Ettmueller, Jefferson City, and William S. Allee, Olean, members of the executive committee.

New Hospital for Kansas City.—Mr. R. A. Long has endowed the Christian Church Hospital in Kansas City with $200,000 in addition to the $150,000 already pledged in popular subscriptions. Dr. William E. Minor and the architect have returned after a visit to the hospitals of the chief cities of the East and Middle West. The chief aims in the construction of this hospital are to be plenty of ground room, a building freely equipped with roof gardens, sun parlors and sleeping porches. The construction of the new hospital is to begin early in 1912.

Personal.—Dr. and Mrs. Joe Carter Weston have started for Europe.——Drs. D. R. Russell, E. A. Pond, Ralph A. Shiras, Joseph L. McDermott, Darwin De Lap and David Robinson have been appointed ambulance surgeons by the Hospital and Health Board of Kansas City.——Dr. Calvin C. Leeper, Braymer, has been reappointed president of the board of control of the State Industrial Home for Girls, Chillicothe.——Dr. Albert J. Campbell, Sedalia, has been elected a director of the Missouri Association for the Relief of Tuberculosis.——Lieut. Laurence C. Cook, M. C., N. G. Mo., Webb City, has been detailed to duty at the maneuver camp on the Texas frontier.

St. Louis

Wins Damage Suit.—Dr. George Tracewell, St. Louis, who entered suit against the United Railway Company of St. Louis for $20,000 actual and $10,000 punitive damages, on account of damages said to have been sustained by his forcible expulsion from a Wellston car in 1909, was awarded $5,000 actual damages and $1,000 punitive damages by the supreme court, May 24.

NEW HAMPSHIRE

New Head of Department.—Dr. Frederick P. Lord, Iowa City, formerly connected with the department of anatomy of the State University of Iowa, College of Medicine, has been secured as the head of the department of anatomy of Dartmouth Medical School, Hanover. Dr. Lord assumes his new duties at the beginning of the next college session.

New Hospital Dedicated.—The Bigelow Memorial Hospital, North Conway, erected for the use of the public by Mrs. Helen Bigelow in memory of her parents, was formally dedicated, May 18. The hospital is located midway between North Conway and Intervale. It is on the cottage plan, with all wards and operating departments on the first floor, and has accomodation for twenty patients.

NEW JERSEY

Bequest.—By the will of the late George A. Bertin, who died in Tunis, in December last, $100,000 is bequeathed to the Children's Seaside Home, Atlantic City.

Money for Preventorium.—Through the efforts of Mrs. J. Borden Harriman, a friend has contributed $50,000 toward the completion of the proposed additions to the buildings of the Tuberculosis Preventorium for Children, Farmingdale. It is said that $23,000 is still needed to bring up the capacity of the institution to its proposed 158 beds, and that $55,000 a year, of which $30,000 has already been pledged, will be required to support the institution.

Health Officers' Association Organized.—The Health Officers' Association of New Jersey met for organization, May 24, at Newark, thirty-three health officers, inspectors and members of local health boards being present. The objects of the association, as stated, are the advancement of knowledge relating to public health and sanitation, and the promotion of social intercourse among health officials. The active members include employees of local and state boards of health, that is to say, health officers and sanitary inspectors, while members of the State Board of Health and local boards of health are eligible to associate membership. The officers of the association are as follows: president, Chester H. Wells, Montclair; vice-president, John O'Brien, Jr., Plainfield; secretary-treasurer, J. Scott MacNutt, Orange, and chairman of executive committee, Dr. Edward Guion, Atlantic City.

NEW YORK

New Hospitals.—The necessary capital has been subscribed for a town hospital for the town of Union to be located in the Bible School building, Lestershire, which will be remodeled for the purpose. The hospital will have accommodation for at least thirty patients and is expected to be ready for occupancy by August.——Dr. Frank W. Sears, Binghamton, announces that his private hospital will be ready to receive patients June 15. The institution is to be known as the Terrace Hospital.

Objection to Hospital Clause.—The State Charities Aid Association has submitted a brief to the senate cities committee opposing those parts of the new charter for New York which would abolish the trustees of Bellevue and the allied hospitals and the board of inebriety and create a department of hospitals. The association says that the trustees of Bellevue and the allied hospitals have succeeded in establishing public confidence in Bellevue and it would be unwise to dismiss them in the midst of their work. The brief also opposes the proposed department of hospitals on the ground that it would not in reality be a department of hospitals, as much of the hospital work would fall under the department of public charities.

New York City

Personal.—The following sailed for Europe on June 3: Dr. David J. Dickson, Dr. and Mrs. Alfred J. Newman, Dr. and Mrs. Julius R. Fabricus and Dr. and Mrs. William G. Wylie. ——Dr. Ernest Sachs has been appointed associate in surgery at Washington University, St. Louis.

Brooklyn Hospital to be Rebuilt.—Plans are in preparation for the rebuilding of the Brooklyn Hospital on DeKalb Avenue and Raymond Street. Twelve new buildings will be erected at a cost of about $1,000,000. A gift of $100,000 has already been received for the construction of a dispensary in memory of the late William H. Harriman.

New Official for Bellevue.—Dr. Walter H. Connolly has been appointed first deputy medical superintendent of Bellevue and the allied hospitals. This position was vacated in February when Dr. Winford H. Smith went to Johns Hopkins and Dr. George O'Hanlon, Kings Park, was advanced to fill the vacancy. If the Municipal Civil Service Commission approves the appointment Dr. Connolly will succeed Dr. O'Hanlon.

Boy's Health League Exhibit.—The De Witt Clinton High School has an association called the De Witt Clinton High School Health League, having about 1,600 members, which is holding an exhibit to show what they have accomplished in four months. They have been so successful and the power of the coming generation in bringing about better health conditions is so generally conceded that an effort will be made during the coming summer to organize all high schools throughout the country into a national league. It is proposed to send the exhibit out to other schools as a model.

Prevention of Infant Mortality.—The Health Commission announces in the Bulletin of May 23 the outline of the plan of the department to reduce the mortality of infants with especial reference to diarrheal diseases. Since May 1 the nurses detailed to schools in the congested districts where the death and birth rates are both high have been visiting the houses where the greatest number of births have occurred since June 1. Each nurse devotes half a day to this work and is required to have under her care seventy-five babies, making visits to each at least once in ten days, and keeping and forwarding daily reports and case records. After June 15 each nurse will be required to have 150 babies under her charge. Nine infants' milk stations have been opened in the city, at each of which a nurse is in attendance, and four more stations will be opened at an early date. During May lectures were given in the public schools to all girls over 12 years of age regarding the care of infants, and, where the need seems evident, "Little Mothers" leagues have been formed. Lecture centers for conferences with mothers with instruction as to the care of well babies and medical attendance for sick babies will be established in the recreation centers, recreation piers and play-grounds.

NORTH CAROLINA

Lightning Strikes Hospital.—St. Agnes Hospital at Raleigh was struck by lightning recently setting fire to the building and resulting in a loss of more than $3,000 to the structure. Fortunately no lives were lost.

College Notes.—Work has begun on the new building authorized by the legislature for the medical department of the university at Chapel Hill, and it is expected the building will be ready in September. The legislature appropriated $37,000 for this purpose.

Hookworm Hospital.—Dr. John A. Ferrel, Kenansville, assistant secretary of the State Board of Health for Hookworm, announces that a special field hospital will be established for the reception and treatment of cases of hookworm in the southeastern section of the state.

Large Endowment for Hospital.—The "Moses H. Cone Memorial Hospital of Greensboro" was incorporated by the secretary of state last week to build a mammoth hospital in Greensboro to cost $1,000,000 as a memorial to the most wealthy citizen of that town who recently died. Work will begin shortly. An auxiliary hospital will also be built at Blowing Rock.

OHIO

Tuberculosis Educational Contests.—Prizes were recently given to the school children of Cincinnati for the best tuberculosis alphabet. Through the cooperation of the Cincinnati *Times-Star*, the Cincinnati Antituberculosis League was able to make the campaign a great success from an educational point of view. Cardinal principles about tuberculosis were emphasized in the minds of thousands of young persons, and the results will be better health. The answer considered the best of all was: "A is for Alcohol, which men should not drink. It weakens their systems and makes their lungs a prey to the consumptive germs." Another letter from the prize-winning alphabet is: "F is for Fight. The only way to get rid of tuberculosis is to fight it and fight it hard." An alliterative contribution is found in the letter D: "D is for Determined Doctors, who fight damp, dusty, dirty dwelling-houses and deadly public drinking-vessels, which destroy, diminish and detract from domestic happiness and increase the death-rate from the dreadful disease, consumption." Mayor Schwab, who acted as one of the judges in the contest, praises the plan and says that it accomplished a vast amount of good in that it helped spread among the youth information regarding one of the worst plagues of the race. The complete prize-winning alphabet is printed in the *Journal of the Outdoor Life* for May.

PENNSYLVANIA

Legislature Thanks Mrs. Dixon.—In a resolution passed by the legislature, Mrs. Samuel G. Dixon, wife of the state commissioner of health, is thanked for the donation to the commonwealth of the Union Chapel at the Pennsylvania State South Mountain Sanatorium, Mount Alto, as a place of worship for the tuberculous patients at the sanatorium and the attendants.

Testimonial to Health Commissioner.—The board of health of the city of Erie has given a strong testimonial to the efficient work done by the State Department of Health in assisting the local health authorities to put down the recent typhoid fever epidemic in that city. The board especially commends the promptness of the response for assistance, the haste with which the body of assistants was dispatched, the thorough method of their work, and the efficient and competent work of the two nurses who were sent by the commissioner. City councils of Erie also adopted resolutions of thanks and appreciation for the excellent work accomplished by the State Department of Health.

Alumnæ Meet.—The thirty-sixth annual meeting of the Alumnæ Association of the Women's Medical College of Pennsylvania was held at the college building in Philadelphia, June 1-2. The fellowship fund of $500 for six months' study abroad was completed by the alumnæ during the session and was awarded by the recommendation of the faculty and the consent of the alumnæ present to Dr. Martha Tracy, Philadelphia, 1904, associate professor of chemistry and director of the laboratory of chemistry. An endowment fund committee was appointed with Dr. Blanca H. Hillman, 1905, chairman. This committee intends to raise $500,000 to equip more fully the laboratories, to increase inadequate salaries, and to aid in research work.

Philadelphia

Southwark Medical Library.—The contract has been awarded for the erection of the Southwark Branch of the Public Libary System of Philadelphia. The Committee on Medical Libraries of the Philadelphia County Medical Society hopes to have plans completed to install a medical book and magazine section when the building is finished.

College Additions.—Plans for the new five-story addition, 50 by 150 feet to be built on the south side of Cherry Street, west of Seventeenth, and for the new one-story dispensary 60 by 180 feet for the Medico-Chirurgical College have been presented by the architect.——Plans are being prepared for alterations to the University Hospital, Thirty-Fourth and Spruce Streets, and for remodeling the Nurses' Home.

College Commencements.—The fifty-ninth annual commencement of the Women's Medical College of Pennsylvania was held May 31. Dr. Harvey W. Wiley delivered the address and thirty-two women received the degree of doctor of medicine.——The eighty-sixth annual graduation exercises of Jefferson Medical College were held June 5. The valedictory address was delivered by Surgeon-General Charles F. Stokes of the United States Navy, and 117 men graduated. The Corinna Borden Keen Research Fellowship was awarded to Dr. Warren B. Davis (Class of 1910). This carries an award of $1,000 and a year's study and research in Europe or elsewhere.

Swimming for Public School Children.—With the consent of Alfred S. Eisenhower, chief of the bureau of city property, six of the city's free bath houses will be devoted to the use of public school children on certain days of each week during ten weeks beginning June 22 and ending August 31. Men and women teachers of swimming will be engaged and free lessons given to the boys and girls of the four grades. William A. Stecher, director of physical instruction, is responsible for this movement as he pointed out to the committee that the report of the coroner showed that 143 persons were drowned last summer.

Wholesome Food and Backward Children.—The University of Pennsylvania will conduct a psychologic clinic this summer and the effect of wholesome food on backward and mentally deficient children will be one of the special studies of the course. Mrs. Louise S. Bryant, of the Russell Sage Foundation, New York, who has made a special study of dietetics, will conduct these experiments. Working with Mrs. Bryant in the school attached to the clinic will be Miss Elizabeth Farrell, in charge of the ungraded classes in the New York public schools, and two specialists in the training of backward children, Miss Walsh and Mrs. Pfeifer, of the Russell Sage Foundation. Beside the work in the clinic and school, the parents of the children will be visited and instructions as to the selection and proper preparation of food will be given.

Personal.—Dr. James C. Wilson has resigned as professor of practice of medicine in Jefferson Medical College.——Drs. W. M. Late Coplin, Edward T. Reichert and J. Nicholas Mitchell have sailed for Europe.——Dr. Michael T. Prendergast is seriously ill in Ocean City, N. J.——Dr. George J. Holtzhausser sailed for Europe May 24.——Dr. Louis Fisher of the staff of the Mount Sinai Hospital was the guest of honor at a banquet given by the members of the staff of that hospital at Mosebach's Casino on May 26. Dr. Fisher has sailed for Europe.——Dr. Edwin A. Jerecki, chief resident of the Jewish Hospital, was given a testimonial dinner at the Mercantile Club, May 20, by the hospital staff and board of officers prior to his departure for Europe, May 27.——Dr. Alfred Stengel sailed for Europe June 8.——At a meeting of the medical staff of the Jewish Hospital the nomination of Dr. Myer Solis-Cohen and Dr. Hervey L. Bates were forwarded to the board of trustees to fill the two vacancies of pediatrist in the hospital staff. Both are chiefs of the children's dispensaries at the hospital.——Dr. George W. Norris has been elected visiting physician to the Episcopal Hospital, vice Dr. David L. Edsall, resigned.——Dr. John Henry W. Rhein has been elected professor of diseases of the nervous system in the Philadelphia Polyclinic and College for Graduates in Medicine.

VIRGINIA

Elections.—At the annual meeting of the South Piedmont Medical Society, held in Lynchburg, the following officers were elected: president, Dr. James S. Haile, Chatham; vice-presidents, Drs. Adam T. Finch, Chase City; Henry W. Dew. Lynchburg, Henry C. Beckett, Scottsburg, and Wm. O. Smith, Altavista; and secretary-treasurer, Dr. George A. Stover, South Boston.——The Staunton Post-Graduate Medical School, at its meeting May 10, elected Dr. Hunter B. Spencer, dean; Dr. Walter F. Hartman, Swoope, vice-dean; Dr. Alexander J. Burkholder, recorder, and Dr. John F. Armentrout, treasurer.

Personal.—Dr. George W. Brown, Saluda, has succeeded Dr. Oliver C. Brunk, resigned, as superintendent of the Eastern Hospital, Williamsburg.——Dr. Albert S. Priddy, Keysville, has been elected superintendent of the epileptic colony, Lynchburg.——Dr. Joseph S. De Jarnette has been reelected superintendent of the Western State Hospital, Staunton, and Dr. Wm. F. Drewry, superintendent of the Central Hospital for Colored Insane, Petersburg, and Dr. John C. King, superintendent of the Southwestern State Hospital, Marion.——Dr. Schuyler B. Moon has been appointed to succeed the late Dr. Adolph G. Hoen as director of the Pasteur Institute of Virginia at the University College of Medicine, Richmond.

GENERAL NEWS

National Antituberculosis Association to Meet.—The seventh annual meeting of the National Association for the Study and Prevention of Tuberculosis will be held at the Brown Palace Hotel, Denver, Colo., June 20 and 21, and on the latter day a meeting will also be held of the Southwestern Conference on Tuberculosis under the chairmanship of Dr. William M. Brumby, San Antonio, Tex. The work of the association will be under three sections; pathologic, clinical and sociologic. The subject for discussion in the advisory council is "Official Responsibility in the Tuberculosis Problem."

Ashford's Work in Porto Rico.—The astonishing record made by Major Bailey K. Ashford, Med. Corps, U. S. Army, in his fight against the hookworm in Porto Rico was testified to by Gov. George R. Colton, of that island, who arrived in New York from Washington on April 26 on his way back to San Juan. According to the *Army and Navy Journal*, he said that 300,000 cases of the hookworm had been cured in the island, and that the disease has been virtually eradicated in the towns and low country, though still prevalent in the coffee district and hill country, where about three-fourths of the population is affected, reducing the value of labor 50 per cent. Governor Colton considers the island ideal for a winter resort, and expects to see it soon become a Mecca for northern tourists in the cold months. Last year the island was visited by 8,000 tourists. The exterior trade of the island has grown from $17,000,000 in 1901 to $68,000,000 in 1910. The health and sanitation service has been conducted by the municipalities, but Governor Colton has been in Washington seeking congressional authority to designate an officer of the Medical Corps, U. S. Army, as director of sanitation, expecting to appoint Major Ashford to that position.

Elections in Special Societies.—The American Dermatological Association, at its thirty-fifth annual meeting held in Boston, May 25-27, selected St. Louis as the next place of meeting and elected Dr. Grover William Wende, Buffalo, as president; Dr. James Sullivan Howe, Boston, vice-president; Dr. James MacFarlane Winfield, Brooklyn, N. Y., secretary and treasurer, and Dr. William Allen Pusey, Chicago, councilor at large.——The thirty-third annual meeting of the American Laryngological Association was held in Philadelphia, May 29-31; the following officers were elected: president, Dr. James E. Newcomb, New York City; vice-presidents, Drs. Frederick C. Cobb, Boston, and Burt R. Shurly, Detroit, Mich.; secretary and treasurer, Dr. Harmon Smith, New York City, and librarian, Dr. Joseph H. Bryan, Washington, D. C.——The American Gynecological Society held its annual meeting in Atlantic City, May 23-25, and elected the following officers: president, Dr. Howard A. Kelly, Baltimore; vice-presidents, Drs. Richard R. Smith, Grand Rapids, Mich., and John A. Sampson, Albany, N. Y.; secretary, Dr. J. Le Roy Brown, New York City (reelected); treasurer, Dr. J. Wesley Bovee, Washington, D. C. (reelected); and councilors, Drs. Reuben Peterson, Ann Arbor, Mich., Franklyn S. Newell, Boston, and Walter W. Chipman, Montreal. Baltimore was selected as the next place for meeting.

Yellow Fever Bulletin.—Although yellow fever seems to have been practically eliminated from the United States, Cuba and the Canal Zone by the measures adopted since the demonstrations of Reed and Carroll and their fellow workers concerning it, yet the disease is still a serious one in many parts of the world. In some of the West Indies, in Central and South America, and especially in Africa, the disease is practically always present. In West Africa, which is being rapidly opened up to settlement and exploitation, the disease is a serious handicap to the development of the country. In 1910 there were extensive epidemics on the west coast. Recognizing the importance of this disease the Liverpool School of Tropical Medicine has begun the publication of a monthly bulletin devoted exclusively to yellow fever. The first number has just appeared and its forty-four pages contain an interesting review of the yellow fever situation in all parts of the world. It contains a number of papers on this disease and discussions by eminent men at the last meeting of the Society of Tropical Medicine and Hygiene; abstracts from other journals, some editorial comment and a bibliography of the publications on yellow fever during 1910 and 1911. This bibliography will be continued and it is hoped to form a complete library on the subject of yellow fever. The School of Tropical Medicine deserves commendation and encouragement for this additional weapon in the fight against yellow fever.

Antivivisectionists' Prayers.—The following prayer has been circulated widely in England: "O God of mercy, send kind death to thy dear dumb creatures, left tortured and agonizing in the laboratories, when the vivisectors go home to dine and sleep." The petition is entitled "My Last Prayer at Night," and is signed by one C. L. Perkins, captain of the royal navy. Recently an attempt of the New England Antivivisection Society to get the clergymen of New England to offer this prayer called forth the following spirited letter from one of them, which appeared in the Boston *Herald*, May 17: "What a delicious paradox this is! Here is a man whose only business is, in time of war, to maim and slaughter his fellowmen, praying every night against those whose profession is to save human life. I think I see him at one moment urging his gunners to rake the enemy's decks fore and aft, yelling like an Ashanti, 'Give 'em h—l, boys!' and several hours later, kneeling in pink pajamas before his berth, slobbering a few maudlin tears over the cats and dogs and rabbits which he thinks the vivisectors have left in their misery. You have asked me, Captain Perkins, to adopt your daily petition as my own. I am almost willing to say yes, but on one condition. Will you offer a prayer of mine, not every day, but once in a while, at least? This is the prayer which I wish you, captain, and all others of your rank might offer: 'O God of nations, send kind death to thy poor soldiers and sailors left mangled and moaning after the battle, while the captains and the kings sit down to celebrate their victory in wine and song. Remember, we beseech Thee, the widows and little children made desolate by brutal conflicts of greed and plunder, brought on too often by an insensate thirst for glory and reward. Save us, our Father, from all who in their blindness foment jealousy between nations and hatred among races, and most of all from those who for the sake of gold would plunge their country into the hellishness of war.' But perhaps I have taken the captain and his prayer too seriously. The card is doubtless a new device in pamphleteering, and a rather clever one, were it not for the stupid blunder of giving the occupation of the writer. I cannot offer such a prayer as this. I know too well the blessings that vivisection has brought to mankind. For my part, I prefer to offer a prayer which will include both sides: for the vivisectors, that they may ever be kept from causing unnecessary pain; for the antivivisectionists, that they may be given that due sense of proportion which will turn them from misdirected sentiment and set their moral enthusiasm free for attacking the really great and sinister evils that beset society."

Permanent Commission for International Medical Congresses.—The offices of the permanent commission are at The Hague, but the first meeting of the commission was held at London in April with Dr. F. W. Pavy in the chair. Among the points considered was the request to include Spanish and Esperanto among the official languages of the international medical congresses. This request was voted down, it being considered inadvisable to add another to the official languages already adopted; in regard to Esperanto, it was stated that it is a language still too little known to be taken into consideration. The International Federation of Dentists had requested that dentists not possessing a medical degree might participate in the congress, but this was also voted down, the commission believing that it is necessary to maintain the general principle that only qualified physicians are eligible to membership in the congress. At the same time the commission calls attention to the statute in the regulations to the effect that scientists presented by national committees or by the executive board can be admitted to membership in the congress. The request of Canada and Poland to be allowed the right to be represented in the international permanent commission was denied, the commission having made it a principle that representation in the permanent commission is to be restricted to delegates from strictly national committees. The organized profession in lower Austria had petitioned for the creation of a section for medical economics, but the commission declined to consider this in view of the fact that all the congresses previously held have been of a purely scientific character and the commission desires to maintain this character.

One of the principal features of the work of the permanent commission is to keep in touch with the boards of international societies and congresses so that coincidences of time, place and subjects may be avoided, and the study of questions requiring international cooperation may be promoted and committees appointed for the purpose. It was voted that the permanent central offices for the international specialist medical congresses can be installed at the central office of the permanent commission. The president or secretary of the permanent boards of the international specialist congresses may be invited to attend the conferences of the permanent commission, and the secretary of the latter may be invited to attend the meetings of the permanent boards of the specialist congresses when subjects of mutual interest are to be discussed, but without the right to vote. The members of the permanent commission include ex officio the presidents and secretaries-general of the last and the approaching international medical congress, a secretary-general and assistant secretary, the president of the international association of the medical press, ex officio, and a delegate from each national committee, the delegate to be elected by the other members of the national committee.

The date for the next medical congress was appointed as August 6 to 12, 1913, the interval between the congresses having been lengthened to four years. The secretary-general is Dr. W. P. Herringham, 40 Wimpole Street, London, W. All suggestions and demands in regard to the international medical congresses should be made to the secretary-general of the permanent commission, Prof. H. Burger, Vondelstraat I, Amsterdam, or to the office of the permanent commission, in charge of P. M. van der Haer, assistant secretary, Hugo de Grootstraat 10, The Hague, Holland. Further particulars were given in THE JOURNAL, April 8, 1911, page 1074.

CANADA

New Sanatorium.—A new sanatorium is to be erected on the bank of the Red River in Elmwood, Winnipeg, by a company headed by Dr. A. D. Carscadden. The building will be four stories and a basement in height, 54 by 85 feet, and will cost $70,000.

Donations to Library.—Dr. Casey A. Wood, Chicago, has donated to the McGill University Medical Library a collection of rare works on diseases and surgery of the eye. Dr. Gordon W. Byers, Montreal, has added to this, 2,500 valuable reprints on ophthalmology. Dr. Wm. Osler and Sir Lauder Brunton have recently sent out a series of magnificent engravings for the new home of the library at Montreal.

Personal.—Dr. John T. Fotheringham, Toronto, is in charge of the medical services of the coronation contingent from Canada.——Dr. Roger Doyen, son of Professor Doyen of the Doyen Institute, Paris, France, is establishing a dispensary for the cure of tuberculosis cases in Montreal.——Dr. Ridley Mackenzie, Montreal, has returned from Europe.——Dr. Charles Kirk Clarke, superintendent of the Hospital for the Insane, Toronto, has been appointed superintendent of the Toronto General Hospital, vice Dr. John N. E. Brown, retired.

Dominion Anti-Tuberculosis Association.—The Canadian Association for the Prevention of Tuberculosis met in London, May 17 and 18, under the presidency of Dr. J. George Adami, Montreal. It was reported that the death rate from tuberculosis had decreased in ten years in Ontario from 11.8 per cent. to 7.6 per cent. A feature of the meeting was the report on the work of the "Hygienic Nine," bands of women of nine who conducted educational classes through the medium of hygienic lectures. Municipal health officers were criticized for their laxity in promoting campaigns with regard to tuberculosis. Dr. J. George Adami was reelected president and Dr. George D. Porter, Toronto, secretary. The next meeting will take place in Toronto.

Hospital News.—Toronto is to have a new private hospital with accommodation for sixty to one hundred patients. Dr. John N. E. Brown, late superintendent of the Toronto General Hospital, is to be in charge.——Dr. Charles K. Clarke, superintendent of the Toronto Hospital for the Insane, has been appointed superintendent of the Toronto General Hospital. Dr. Clarke is dean of the medical faculty of Toronto University. This will bring the two institutions into closer relationship.——Dr. William C. Barber, late of the Rockwood Hospital for the Insane at Kingston, is to establish a large private sanitarium at Orillia, Ont.——Dr. J. M. Forster, superintendent of the Hospital for the Insane at Brockville, has been appointed superintendent of the Toronto Hospital for the Insane.——Dr. John C. Mitchell of the Hamilton Hospital has been appointed superintendent of the Brockville institution.

Society Meetings.—Alberta Medical Association met in Edmonton the last week in April and elected Dr. Park, Edmonton, president; Dr. Frank W. Crang, Strathcona, vice-president, and Dr. George McDonald, Calgary, registrar.——The fourth annual meeting of the Toronto Academy of Medicine was held in their new quarters in Queen's Park and the following fellows were elected as officers and council: president, Dr. Newton A. Powel; vice-president, Dr. Richard A. Reeve; past president, Dr. Harley Smith; honorary treasurer, Dr.

William A. Young; chairmen of sections—medicine, Dr. Graham Chambers; surgery, Dr. Herbert A. Bruce; pediatrics, Dr. John T. Fotheringham; pathology, Dr. John J. McKenzie; ophthalmology, Dr. Chas. Trow; state medicine, Dr. John S. McCullough, and elective members, Drs. John Ferguson, William J. Malloch, Herbert J. Hamilton, James F. W. Ross, Patrick W. H. McKeown, Alexander McPhedran, Fred N. G. Starr, and Edmund E. King.

Meeting of Ontario Medical Association.—The thirtieth annual meeting of the Ontario Medical Association was held in Niagara Falls, Ontario, May 30 to June 1, under the presidency of Dr. Henry R. Casgrain, Windsor, Ont., Dr. F. Arnold Clarkson, Toronto, acting as general secretary. The address in medicine was delivered by Dr. Thomas B. Futcher, Baltimore, who took for his subject "The Relationship Between the Ductless Glands and Carbohydrate Metabolism," and the address in surgery, by Dr. Alexander E. Garrow, Montreal. A resolution was adopted calling for provision to be made at each general hospital in the province for the care of tuberculosis cases. It also recommended that any general hospital refusing to provide wards for such cases should be reported to the provincial government and have their annual grant withdrawn. Another discussion receiving considerable attention was that of infant mortality, the chief health officer for the province recommending that mothers should be recompensed with a small sum when each of their children reached five years of age. The report of the special committee on the revision of the constitution was adopted whereby the Ontario Medical Association would become a branch of the Canadian Medical Association. The following officers were elected: President, Dr. Herbert A. Bruce, Toronto; vice-presidents, Drs. Frank E. Wilson, Niagara Falls, William Hall, Brampton, Frederick P. Drake, London, George H. Field, Coburg; treasurer, Dr. James H. Mullin, Hamilton; and general secretary, Dr. F. Arnold Clarkson, Toronto.

LONDON LETTER

(*From Our Regular Correspondent*)

London, May 27, 1911.

The National Insurance Bill

The medical profession, which is notoriously difficult to move in political matters, has been thoroughly roused by the national insurance bill, which threatens it with an economic revolution unprecedented in its history. Meetings to consider the bill are being held all over the country and a special representative meeting of the British Medical Association will be held in a few days. Both the medical and the lay press are deluged with letters from doctors protesting against the bill. The total conversion of practice among men with incomes below $800 into contract practice is viewed with dismay. The contract practice of the friendly societies is tolerated by the profession as a necessary evil because many of the members are not in a position to pay the regular fees and it has always been considered a grievance that patients who can afford to pay fees should be admitted into such societies. Under the present bill this would occur on a large scale, as many men with incomes from $500 to $800 can afford to pay, and do pay, fees. Moreover a large disadvantage, the magnitude of which is difficult to gauge, will be introduced by the admission of all persons, however weak or subject to disease. Under the friendly societies a medical examination has to be passed before admission. A strong feeling exists in the profession that payment should be made for work done and not by capitation fee. But this is open to the grave objection that it would encourage malingering, as the shortening of illness would be in the interest of neither doctor nor patient. It is also felt that no person with an income of $400 should be eligible for medical benefits. If payment is to be made by capitation fee, the one proposed, $1.25, is considered inadequate and a fee of $2 is suggested. The appearance of the bill has already affected doctors injuriously as practices are becoming unsalable. Many men are bitterly complaining that a practice for which a few years ago they paid $5,000 is quite unmarketable. It also seems that the bill will have a most injurious effect on the funds of the voluntary hospitals. At present much money is derived from contributions by employers and workmen. It is thought that when the bill becomes law the employers will not be so willing to contribute to the hospitals as they will already be compelled to contribute toward the sickness benefit of the men. The latter will also be less willing or less able to pay, as a compulsory deduction will be made from their wages under the bill.

The Census

A preliminary report has been made on the census which was taken at the beginning of this year. The population of England and Wales is found to be in round numbers 36,000,000—an increase of 3,500,000 over the last census in 1901. The percentage rate of increase is 10.91, which shows a diminution of the rate of the previous decade. In 1881 the percentage was 14.36, in 1891 11.65, and in 1901 12.87. The population of London is now 7,250,000, but this increase has taken place entirely in the "outer ring," where it amounts to 33 per cent. The development of tube railways, motor bus services, and electric transit generally has offered great facilities for getting out of the crowded centers. Hence there has been a great movement of population not only from the centers, but also from the inner to the outer suburbs. The population of Ireland, as in the past, shows a decrease. In the ten years this amounts to 76,824, or 1.7 per cent. The population now is 4,381,951. There are only three towns with a population over 50,000—Belfast, 385,492; Dublin, 309,272, and Cork, 102,274.

Is a Doctor a Workman?

An interesting legal point under the Workmen's Compensation Act has arisen in consequence of a doctor who had been house-surgeon at the Kidderminster Infirmary claiming compensation for injuries arising out of his employment. His salary was $500 a year with board and lodging. When he first took office there was no *x*-ray apparatus but after a time one was installed which it was decided to use in some cases of ringworm. Before doing so, after consultation with one of the honorary surgeons, it was decided to try the apparatus on the house-surgeon's arm to test the effect of the treatment. Though the application lasted only fifteen minutes the results were so serious that he had to submit to an operation on the arm and the wound took six weeks to heal. The applicant stated that the experiment was carried out for the benefit of the patients. Medical witnesses said that it was his duty to submit to experiment, although they admitted that his duties were prescribed by the rules of the institution which had not been altered since the apparatus was introduced. In giving judgment the judge said that it did not follow because a new knife was introduced a house surgeon should allow the knife to be tried on his body. According to the terms of the applicant's contract with the infirmary it was clear that the question of a dangerous experiment did not arise on his appointment. He accordingly dismissed the application but gave leave to appeal. The question whether the doctor was a "workman" within the meaning of the Workmen's Compensation Act was not definitely decided by the judge but the point on which he gave judgment and the leave to appeal indicate that he regarded the applicant as such.

PARIS LETTER

(*From Our Regular Correspondent*)

Paris, May 19, 1911.

Vital Statistics in France in 1910

The *Journal Officiel* will soon publish statistics for the population of 1910. The following are the essential figures, with a total population of 39,961,945.

Number of living births	774,358
Number of deaths	703,777
Number of marriages	309,289
Number of divorces	13,049

The births exceed those of 1909 by 4,389, but the advantage is very slight; the number is practically the same as that of the three preceding years, during which it was lower than it had previously been for more than one hundred years. In 1859, there were in France 1,018,000 births, and this figure was just about maintained up to 1868. Then it fell to 948,000. From 1868 to 1886 the figures began with a 9. After 1887 it was reduced to 899,000 and continued to be written with an initial 8 until 1906. For four years it has fallen to the figure 7, and the year 1909 also confirms this decadence.

The death-rate was extraordinarily low in 1910, but on close inspection not much reason for congratulation is found. If there are few deaths that is due, in great part, to the fact that there are few births. In fact, there were in 1910 only 90,000 deaths of children of 1 year of age and under. This figure, when compared with that of the births (774,358), represents a mortality of 12 per cent. In 1906 the mortality was about the same (14 per cent.), but as there were more births (807,000) this mortality produces 116,000 deaths or 26,000 more than to-day. Consequently, the diminishing of the number of infantile deaths is due, not to improvement, for the chances of death remain about the same, but to the constant decline of the birth-rate.

Can this lamentable situation be improved? Dr. Jacques Bertillon, head of the municipal statistics of the city of Paris, believes that it can. In support of his view he cites the increased number of marriages which he attributes to the influence exercised by the law of 1907, which has simplified the formalities of marriage. The following are the number of marriages in France:

Before the law of June 21, 1907:

	First Semester	Second Semester
1902	152,890	141,896
1903	152,386	143,610
1904	152,454	146,267
1905	153,812	148,811
1906	154,800	151,687
1907	154,081	....

After the law of June 21, 1907:

	First Semester	Second Semester
1907	......	160,822
1908	162,495	153,433
1909	156,294	151,657
1910	156,761	152,728

In Belgium a similar law has exercised an analogous influence; marriages have become more numerous and earlier, while illegitimate births have become rarer and legitimate births have increased. Likewise, in Bavaria, a similar law has had important consequences on the birth-rate and the increase of the population. Dr. Bertillon believes, therefore, that there is no reason to say that the legislator is impotent against a moral evil. There is, he believes, no adequate physiologic or economic reason why France should not increase like all other countries.

Memorial to Dr. Mesny

The commission charged with the administration of the Carnegie Foundation for recompensing acts of heroism, has just awarded the golden medal with a gift of $5,000 (25,000 francs) to Mme. Gérald Mesny as a memorial of her husband, whose heroic death in Manchuria has been mentioned (The Journal, March 18, 1911, p. 826). Moreover, the members of the international conference on the plague assembled at Mukden, visited the tomb of Dr. Mesny at Harbin in a body and Dr. Broquet, delegate of the French government, made a touching speech.

New Director-General of the Vaccine Institute

On May 16, the Académie de médecine nominated a new director-general of the Institut supérieur de vaccine to succeed Professor Kelsch, who died last February. Dr. Robert Wurtz, agrégé professor at the Faculté de médecine de Paris and physician of the hospitals, was unanimously chosen. He is a son of the illustrious chemist who was one of the most distinguished professors of the Faculté de médecine de Paris. Dr. Robert Wurtz is known especially for his works on bacteriology, hygiene and epidemiology. He was, for a long time, in charge of the mission at Abyssinia, where he was on various occasions, called to give attention to Emperor Menelik. Some weeks ago, he visited Guinea and the Congo to study sleeping-sickness and other exotic diseases.

A New Procedure in Radiotherapy

At the same session, Dr. Béclère read before the Académie de médecine a report on the work of Dr. Haret, assistant in radiotherapy at the Hôpital Saint-Antoine, the introduction of the radium ion into pathologic tissues without breaking the skin. The procedure consists in employing electrolysis to make the radium, under the form of ions, penetrate through the skin into the cellular elements of the neoplasms. The technic is as follows: application on the diseased region of the positive electrode composed of a compress saturated with a solution of 10 micrograms of radium bromid; passage of a current of 10 milliamperes for thirty minutes; three sittings a week. Dr. Haret's therapeutic attempts along this line have as a scientific base a whole series of experimental researches on rabbits and young cattle. These researches have shown that electrolysis causes the radium ions to penetrate through the unbroken skin into the subjacent tissues, aponeurosis, muscle, periosteum and bone, and that it reaches the depth of at least 9 cm. (about 3½ inches), accumulates there in heavy doses and remains for more than fifteen days without injury to the healthy cellular elements or to the general condition of the experimental animal. These experiments have shown the harmlessness and the legitimacy of this new method of radiotherapy. The application of these experimental data to the treatment of neoplasms has already furnished Dr. Haret about ten observations, of which the most important concerned a large sarcoma of the shoulder-blade in a young woman of 27. This sarcoma, after having diminished considerably in volume under the influence of Roentgen rays, remained stationary with persistent pains, but after several treatments with radium introduced by electrolysis, the pain ceased, the tumor diminished and finally disappeared completely. Although this new method of radiotherapy has not always been followed with such favorable results, Dr. Béclère believes that it justifies serious hopes. Up to the present, it has been employed alone, but it may be predicted that it will often be combined advantageously with radium irradiations and that the domain of the application will be extensive like that of the Roentgen rays.

Diet in Typhoid Fever

At the same session, Dr. H. Vaquez, physician of the hospitals of Paris, called the attention of the academy to recent changes in the ideas with regard to the diet of typhoid patients. Some Russian and German physicians have not hesitated to depart from the strict milk diet, and Dr. Vaquez has followed their example by instituting various régimes of which milk still constitutes a part, but in which porridges, eggs, purées, creams and raw and rare meat are also used.

Some have considered this diet imprudent at least. It has been accused of causing grave complications, such as intestinal perforation and hemorrhage, and of augmenting the chances of relapse. To these altogether theoretical criticisms, Vaquez opposes facts. Varied diet in connection with systematic balneotherapy in 160 cases has resulted in fifteen deaths, of which three were caused by intestinal perforation. He has had only eight cases of intestinal hemorrhage, of which only two were serious. There were twenty-two relapses. These results are not materially different from those of the best statistics obtained with treatment by other methods. It should be added that the duration of typhoid fever was much shortened, and that, in particular, the period of descending oscillations was remarkably shorter. The fall of temperature often occurred, not as lysis, but abruptly, as in pneumonia. Complications connected with secondary infections were very exceptional. They were confined to four cases of phlebitis, three of pyelonephritis, one of cholecystitis, one of otitis and one of subcutaneous abscess.

Dr. Vaquez concludes, therefore, that varied diet in typhoid fever does not produce the ill effects which have been attributed to it, but that, on the contrary, it is capable of facilitating the favorable outcome of the disease and of protecting the patient from the secondary complications which so often make the prognosis unfavorable.

Personal

On May 9, the Académie de médecine elected a member in the section of pathologic anatomy to replace Dr. Lancereaux, who died last October. Dr. Achard, who was elected, was born in 1860. He was formerly a pupil of Professor Lannelongue and collaborated with Professor Debove in editing several manuals of medicine. He was physician at the Hôpital Necker, and last year was appointed to the chair of general pathology at the Faculté de médecine de Paris, where he succeeded Professor Bouchard.

BERLIN LETTER

(From Our Regular Correspondent)

Berlin, May 18, 1911.

Personal

Surgeon-General Dr. Villaret, a military surgeon of high rank, died May 9, aged 64. Villaret rendered a not inconsiderable service to the development of military sanitation and also showed, a manifold literary activity, being especially widely known as the editor of the dictionary of universal medicine (*Handwörterbuch der gesamten Medizin*).

Increased Municipal Hospital Facilities

The deputation for municipal hospitals determined at a recent session to rebuild and extend the municipal hospitals to the extent that seems necessary as soon as possible. A hospital is to be erected for prostitutes and one for infectious diseases at the Urban Hospital and also a hospital for children in the south part of Berlin, in which nurslings and

Joseph T. Pindell, M.D. University of Maryland, Baltimore, 1865; a medical cadet in 1864 and then for two years surgeon in the army; at one time a member of the council and mayor of Wellsville, Kan.; died at his home in that city, May 22, from nephritis, aged 81.

John H. Dennard, M.D. Atlanta (Ga.) Medical College, 1893; a member of the Medical Association of Georgia and at one time mayor of East Point; local surgeon of the Seaboard Air Line; died at his home in East Point, May 21, from hemorrhage, aged 38.

John H. Whitenack, M.D. Medical College of Indiana, Indianapolis, 1874; superintendent of the pharmaceutical department of a wholesale drug house of Indianapolis; was stricken with apoplexy, May 23, and died in an ambulance while being taken to his home.

Andrew Guffin Cooper, M.D. Indiana University School of Medicine, Indianapolis; of Scircleville, Ind., intern in the Indianapolis City Hospital; aged 29; was almost instantly killed in a collision between the hospital ambulance and a street car, May 14.

John D. McGirk, M.D. University of Pennsylvania, Philadelphia, 1871; founder of McGirk's Sanitarium at Philipsburg, Pa., and a member of the borough council from 1865 to 1868; died at his home in Philipsburg, May 25, from senile debility, aged 76.

Clarissa Van Yeomans, M.D. Hahnemann Medical College, Chicago, 1870; for more than twenty years a practitioner of Clinton, Ia.; died at the home of her daughter in Grand Crossing, Chicago, May 6, from senile debility, aged 89.

Dalton Stewart McCarthy, M.D. Trinity Medical College, Toronto, 1893; of Hemet, Cal.; a member of the American Medical Association; died at the home of his parents in Orangeville, Ont., May 14, from nephritis, aged 41.

Robert Atkinson, M.D. University of Maryland, Baltimore, 1854; founder and for thirty years president of the Atkinson Private School for Boys, Baltimore; died at his home in Baltimore, May 21, from pneumonia, aged 79.

Peter Follman, M.D. Ecole de Médecine, Paris, France, 1860; a practitioner of the United States since 1863, and a resident of Mankato, Minn., since 1869; died at his home in that city, May 17, from cerebral hemorrhage, aged 84.

Elbert C. Macy, M.D. Hahnemann Medical College, Chicago, 1885; a veteran of the Civil War; for forty-five years a practitioner of Pleasanton, Ia.; died recently at his home, and was buried, May 13, aged 66.

Alpheus Prince, M.D. University of Buffalo, N. Y., 1883; a member of the pension examining board of Byron, N. Y.; died at the home of his son in Ithaca, N. Y., May 18, from nephritis, aged 55.

John Francis Baker, M.D. Long Island College Hospital, Brooklyn, N. Y., 1890; of New Haven, Conn.; died at St. Raphael's Hospital in that city, May 21, after a surgical operation, aged 50.

Albert Hamilton Hayes (license, Massachusetts, years of practice, 1894); of Boston; was overcome by heat in a subway station in Boston, May 22, and died a few moments later, aged 71.

Pierre M. Fourguette, M.D. Faculté de Médecine, Paris, France, 1882; for several years physician of the French Society of New Orleans; died at his home in that city, May 21, aged 53.

William Burgess Brengle, M.D. Rush Medical College, 1879; a member of the Oklahoma State Medical Association; physician of Noble County; died at his home in Perry, May 18, aged 58.

William Robert Anthony Wilson, M.D. College of Physicians and Surgeons, New York City, 1895; formerly of Peoria, Ill.; died at his home in Pittsfield, Mass., May 13, aged 41.

William Protzman, M.D. Cincinnati College of Medicine and Surgery, 1882; one of the oldest practitioners of Lincoln, Neb.; died at his home, May 23, from senile debility, aged 82.

William McKee Eldon, M.D. Jefferson Medical College, 1888; formerly a member of the American Medical Association; died at his home in Roaring Spring, Pa., May 18, aged 51.

G. E. Milton Smith, M.D. University of Maryland, Baltimore, 1888; of Baltimore; died at the Church Home and Infirmary in that city, May 22, aged 43.

John Bugbee Hartwell, M.D. Albany (N. Y.) Medical College, 1856; died at his home in Lockport, N. Y., May 2, from arteriosclerosis, aged 82.

George P. Shoemaker, M.D. College of Physicians and Surgeons, Keokuk, Ia., 1882; died at his home in Hendley, Neb., May 4, aged 58.

Charles Henry Hamilton, M.D. Rush Medical College, 1873; died at his home in Dubuque, Ia., May 28, from erysipelas, aged 68.

Daniel H. Whitford, M.D. Bennett Medical College, Chicago, 1878; died at his home in Elgin, May 17, aged 58.

William H. Pickford, M.D. Jefferson Medical College, 1881; died at his home in Philadelphia, May 15.

The Propaganda for Reform

IN THIS DEPARTMENT APPEAR REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY, TOGETHER WITH OTHER MATTER TENDING TO AID INTELLIGENT PRESCRIBING AND TO OPPOSE MEDICAL FRAUD ON THE PUBLIC AND ON THE PROFESSION

[CONTRIBUTION FROM THE CHEMICAL LABORATORY OF THE AMERICAN MEDICAL ASSOCIATION]

PIX CRESOL

W. A. Puckner and W. S. Hilpert

In a paper on "The Abuse of Chemical Formulas"[1] several examples were given of the various methods employed by "patent medicine" concerns to give standing to their products by assigning to them a chemical formula. In some cases the formulas given are impossible, in other cases they may represent the chemical composition of only one constituent or it may be an attempt at both. To a chemist such formulas are absurd and on seeing a formula which he knows to be wrong he naturally thinks "Fake," "Ignorance," or both. Just such a formula ($C_5H_6N.SO$) applied to a product called Pix Cresol, manufactured by the "Pix Cresol Chemical Co., Kansas City, Mo.," attracted our attention. No mention of such a formula can be found in such works as Richter's most complete Index of Carbon Compounds, nor the three supplemental volumes published, 1901-1905, by the German Chemical Society and Beilstein's Organic Chemistry (3rd Edit.). This fact, supplemented by inquiries from correspondents as to the composition of the substance made it seem worth while to make a chemical examination of it.

The examination was made and showed that the essential constituent was oxyquinolin sulphate. As potassium sulphate was also found it was concluded that Pix Cresol was a preparation containing a mixture of oxyquinolin sulphate and potassium sulphate, which has also been known in the past under the proprietary name, "Chinosol." At this time a letter was referred to the laboratory containing the report of an analysis of Pix Cresol, which showed the presence of oxyquinolin sulphate but no potassium sulphate. As this indicated that Pix Cresol contained as its essential constituent the substance now sold as Chinosol, the laboratory purchased a new specimen of Pix Cresol from the Chicago representatives of the Pix Cresol Co. The examination[2] of this specimen showed that it consisted of approximately 21 per cent. oxyquinolin sulphate, about 8.3 per cent. potassium sulphate and the remainder almost entirely milk sugar.

It is evident, then, that both the specimen of Pix Cresol obtained directly from the manufacturers and also the one purchased more recently from the Chicago agent, contain as an essential constituent Chinosol of the composition sold formerly. The substance now sold under the name Chinosol and described in New and Nonofficial Remedies is pure oxyquinolin sulphate, and as the exploiters of Pix Cresol probably obtain their supply of oxyquinolin sulphate from the Chinosol Company, the sole American agents for Chinosol, it is to be expected that Pix Cresol should change in composition. It is probable that the analysis referred to the laboratory deals with a more recent specimen than the two examined in the Association laboratory.

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[1] Puckner, W. A.: Report of the Chemical Laboratory of the American Medical Association, iii, 7.

[2] The analytical details will be published in the annual report of the laboratory.

Editorial Note: In view of the Council on Pharmacy and Chemistry's findings,[3] viz., that chinosol is a powerful antiseptic but a feeble germicide and considering that Pix Cresol contains but 21 per cent. oxyquinolin sulphate, the absurdity of the following claims made for Pix Cresol require no further comment:

> "Pix Cresol is an Absolutely Sure and Yet Perfectly Safe, Never Failing Destroyer of Pus (*Staph. Pyogenes Aureus.*)"
>
> "It is germicidal, bactericidal, bacillicidal. It is certain as a microorganism destroyer. It destroys absolutely."
>
> "Ridding the blood of germs, it aids in rendering it replete with oxygen———."
>
> "It kills the germs."
>
> "No organism that is causative of morbid processes can withstand it."
>
> "It destroys microorganisms of all kinds. It destroys them absolutely."
>
> "The germ's tenacity of life does not avail against its action as germicide."
>
> "It destroys the spores and toxins utterly."

A further estimate of the pseudo-chemical company, bearing the name of this "strongest, safest, least expensive medical antiseptic, disinfectant and deodorizer known" may be gained by a cursory glance at some of its "specialties":

"Maizinin compound, Positive Chill and Malaria Specific" the firm says, "prepares the parasites for execution by the leukocytes." It is said to contain arsenic, while the name implies the presence of some plant drug.

"Psora, the Syphilis Specific," is a shot-gun mixture said to be "the scientific combination of the soluble Triple Iodids with the active principles of Echinacea, Cascara amagra, Berberis aquif., and Phytolacca rad.," and is claimed to make "the syphilitic lesions disappear and fail to return."

"Rectoids—Cones for the treatment of all rectal trouble," are said to be "a combination of Rectin (Pix) compounded from Buckeye, Collinsonia, Hammamelis, Belladona, Pix Cresol."

"Tablets for the Female—Pix Cresol Uterettes," it is said, "for sanitary purposes may be continued forever . . . "

When one realizes that this sort of pseudo-scientific twaddle is accepted by many physicians at its face value, the outlook for therapeutics seems dark, indeed. So long as the existence of such concerns is tolerated by the medical profession, so long will there be a crying need for a "Propaganda for Reform in Proprietary Medicines."

Correspondence

Long Beach and the Los Angeles Session

To the Editor:—I was sorry not to see more in the Los Angeles Number of The Journal about Long Beach, the largest (17,500 people) and most popular beach suburb of the convention city. The trolley service between here and the city is a twenty-minute one and the journey, 22 miles, is covered in forty-five minutes. It is a city of easterners almost entirely, nearly every state being represented. We have good schools, including a $150,000.00 polytechnic high school.

While we have a "Pike," and an 1,800-foot pier stretching out into the ocean, large hotels and apartments, amply able to accommodate enormous crowds, we have one distinction (our greatest asset, and that for which we are best known as a pleasant place for a man to send his family); we have no saloons.

Many physicians will be glad to know that they can bring their families to such a place and be with them at night without missing a single session and, further, that the family will be in good surroundings and on the beach for their recreation time instead of in the crowded city.

We have Dr. Evans in our auditorium (seating 6,000, and on the pier), on June 23, on the subject of "The Great White Plague."

Thomas L. Rogers, Long Beach, Cal.
Secretary-Treasurer, Long Beach Medical Society.

Pilocarpin in Pruritus

To the Editor:—In your article on pruritus in The Journal (April 8, 1911, p. 1034), you omitted reference to the internal use of pilocarpin in pruritus. It will be found of exceptional value in the pruritus so often accompanying influenza, the pruritus of jaundice and pruritus vulvæ. Atropin combined with pilocarpin checks the sweating and salivation, which otherwise are liable to occur.

Dose:

Pilocarpin	gr. 1/4
Atropin	gr. 1/100

Give only when the pruritus commences.

John J. Reid, M.D., New York.

The Physician's Opportunities in the Foreign Field

To the Editor:—In recent copies of The Journal I noticed something in regard to medical missions. A beautiful picture in the life of our Lord Jesus Christ while on earth is given by Luke the beloved physician in the fourth chapter of the Gospel according to Luke, verses 33 to 44 inclusive. I quote from it:

> "And Simon's wife's mother was taken with a great fever; and they besought Him for her. And He stood over her, and rebuked the fever; and it left her; and immediately she arose and ministered unto them. Now when the sun was setting, all they that had any sick with divers diseases brought them unto Him, and He laid his hands on every one of them, and healed them.
>
> "And devils also came out of many . . . And the people sought . . . that He should not depart from them. And He said unto them, I must preach the Kingdom of God to other cities also; for therefore am I sent. . . . "

China, Arabia, Burmah, Laos, India, China, the great unoccupied fields of central Asia, Mongolia, Afghanistan, Turkestan, Manchuria, the Philippines and many other islands of the sea, are all crying out to-day for the ministry of healing, and offer to the Christian physician a glorious field of service. Men like Livingston, Parker and Morrison have given luster to the medical profession.

The mission boards are calling for medical men now, some for my field, Korea. The first resident Protestant missionary to Korea was Dr. Horace M. Allen, who by ministering to the severely wounded prince in the early days, received the royal favor of the emperor of Korea, whose favorable attitude toward missionaries and mission work did much to open that land to the gospel. The needs of the people in these lands for intelligent medical service is indescribably great. They gladly avail themselves of the physician's ministry. Medical supplies, instruments, the dispensary and eventually a hospital are usually supplied the physician by the board he represents. Sometimes these hospitals are the gifts of the people on the field in appreciation of the doctor's services as in the case of Dr. Allen's fine hospital in Madras, India.

Diseases met in these lands cover a wide field; diseases of the eyes, skin diseases of children, difficult obstetric cases (the normal cases usually being seen by midwives), a wide field of surgicel cases, tuberculosis, and the diseases peculiar to those lands, leprosy, beriberi and many others, offer a field for special investigation and study for those who so desire. Above it all there is a terrible heart-rending cry of suffering going up from these non-Christian lands which should reach the heart of the Christian physician and cause him prayerfully to consider his own relation to this call and the willingness to meet it, remembering the words of our Lord Jesus Christ, the great physician: "Inasmuch as ye have done it unto one of the least of these my brethren ye have done it unto Me."

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[3] Council on Pharmacy and Chemistry Reports, 1910, p. 47.

In addition to the actual work of the medical missionary there is a great field for medical teaching. The object of the medical mission work is primarily to win the people to Jesus Christ using healing as a means to this end and in answer to our Saviour's command: "Go ye into all the world and preach the gospel to every creature."

In our own field in southern Korea there is a call now for two medical missionaries. *Information as to this call may be* obtained by writing to Dr. S. H. Chester, Secretary Executive Committee on Foreign Missions, Southern Presbyterian Church, First National Bank Building, Nashville Tenn.

To those who are interested in further information concerning medical missions, most helpful and interesting information may be obtained from the following sources:

Medical Missions, by Wanless, price 25 cents.
Murdered Millions, by Dowkont, price 15 cents.
The Supreme Decision, by George Sherwood Eddy, price 10 cents.
The Work of the Medical Missionary, price 15 cents.

These and others can be obtained from Mr. W. B. Smith, Candidate Secretary, Student Volunteer Movement, 125 East Twenty-Seventh Street, New York City.

W. H. Forsythe, M.D., Mokpo, Korea.

Queries and Minor Notes

Anonymous Communications will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

SPOROTRICHOSIS

To the Editor:—I have recently noticed articles in The Journal on sporotrichosis. I can find nothing in the text-books on the disease and am anxious to know where I can find something on the subject, fully setting forth just what it means.

S. C. Broadstreet, Mt. Pleasant, Texas.

Answer:—Sporotrichosis is described in recent books on skin diseases (Stelwagon, Hyde, Pusey, etc.). In his paper "A Case of Sporotrichosis in Man" (The Journal, May 6, 1911, p. 1312), Dr. H. J. Harker gives a bibliography which includes the principal contributions on this subject in English literature. Reference may also be made to the article by Dr. R. L. Sutton ("Sporotrichosis," The Journal, Sept. 17, 1910, p. 1000) which gives a rather full bibliography.

BACTERICIDAL EFFECTS OF ALCOHOL AND CHLOROFORM

To the Editor:—1. How long will it take 94 per cent. commercial alcohol to kill the ordinary pus-producers?

2. Which will kill a germ most quickly, 60 per cent. or 94 per cent. alcohol? (a) on the skin and (b) in glass bottles.

3. How long will it take an anesthetic, such as ether or chloroform, to kill pus-producers?

L. T. S. Hottendorf, M.D., Randolph, Utah.

Answer.—1. Several hours. Ten per cent. alcohol restrains the growth of bacteria, but an alcohol of nearly absolute strength is required to *kill* bacteria, and even this is not efficient against spores.

2. The stronger alcohol is more efficient, both on the skin and in glass bottles.

3. We find no statement with regard to the bactericidal activity of ether. Chloroform is active in 1 per cent. solution. A considerable period of contact would be required.

RED CLOTHING AND ACTINIC RAYS

To the Editor:—With great interest I read your editorial on "The Use of Orange-Red Underclothing in the Tropics" in your issue of May 20. This editorial contains the following sentence: "Orange-red underclothing and hat-linings were chosen on account of the known resistance of this color to the actinic rays of the sun." Can you tell me where I can find some scientific data regarding this fact?

E. E. Blaauw, Buffalo, N. Y.

Answer.—The use of red underclothing and hat-linings is simply an adaptation of the well-known principles governing the proper construction of a "dark room" for the development of negatives. The "Century Dictionary" says that such a room is one "from which all actinic rays have been excluded. . . . This dark room is not without light, but its light is of a quality which in no way affects the plate." As red objects owe their color to the fact that they transmit only that part of the light whose combined effect on the eye is red, it follows that the ultraviolet or actinic rays, which lie at the other end of the spectrum, will not easily pass through the orange-red material. For a full discussion of the principles of light and heat absorption and radiation see "Elementary Treatise on Physics," by Ganot, translated from the French by E. Atkinson. Wm. Wood & Co., New York, 1906. For further elaboration and application of these physical laws to the point in question see "Effects of Tropical Light on White Men," by Major Charles E. Woodruff, U. S. Army, Rebman Publishing Co., New York, 1905.

The Public Service

Medical Department, U. S. Army

Changes for the week ended June 3, 1911.

Wolfe, Edwin P., major, granted one month's leave of absence, to take effect about July 1, 1911.

Wolven, F. Homer, D.S., reported for temporary duty at Fort William H. Seward, Alaska.

Lowe, Thomas S., M.R.C., left from temporary duty at Fort Apache en route to Douglas, Ariz., for field duty.

Clark, John A., captain, leave of absence extended twenty days.

Carter, Charles S., C.S., reported for duty at Fort Morgan, Ala.

Kunckel, George I., D.S., ordered to temporary duty at several posts in the Department of the Gulf.

Phillips, Hiram A., lieut., reported on ten days' leave of absence.

Lynch, Charles, major, ordered to Boston on special business pertaining to the American Red Cross.

Ballard, James C., M.R.C., reported for temporary duty at Fort Miley, Cal.

Wales, Philip G., major, ordered to Washington, D. C., for examination for promotion.

Ashford, Mahlon, lieut., granted leave of absence for two months with permission to apply for extension of one month.

Kinard, Kerwin W., M.R.C., recently appointed, ordered to active duty and assigned to station at Fort Ethan Allen, Vt.

Hughes, Leonard S., 1st-lieut., relieved from duty with maneuver division and ordered to Fort Clark, Texas, for duty.

Boyer, Perry L., captain, relieved from duty at Fort Clark, Texas, and ordered to Chicago, Ill., for duty as attending surgeon, headquarters, Department of the Lakes.

Hall, James F., captain, relieved from duty as attending surgeon, headquarters, Department of the Lakes, Chicago, and ordered to Fort Strong, Mass., for duty.

Lombard, Marion S., M.R.C., recently appointed, ordered to active duty and assigned to duty with troops at target range, Ashland, Neb.; on completion of this duty assigned to him will stand relieved from active duty in M. R. C.

Heflebower, R. C., lieut., left Fort Bayard, N. M., on twenty days' leave.

Hoff, John Van R., colonel, ordered to make inspection of medical departments at several posts in the Department of the East.

Medical Corps, U. S. Navy

Changes during the week ended June 3, 1911:

Berryhill, T. A., medical inspector, detached from the marine recruiting station, New York, and ordered to the naval medical supply depot, Brooklyn.

Brownell, C. D., surgeon, detached from the naval hospital, Las Animas, Colo., and ordered to the Naval Medical School Hospital, Washington, D. C., for treatment.

Stepp, J., surgeon, ordered to the *Missouri*.

Moran, C. L., P. A. surgeon, commissioned passed assistant surgeon from Feb. 10, 1911.

Hough, F. P. W., and Rhoades, G. C., P. A. surgeons, commissioned passed assistant surgeons from April 11, 1911.

Smith, W. B., P. A. surgeon, detached from the naval hospital, Annapolis, Md., and ordered to the Naval Academy.

Hayden, R., P. A. surgeon, detached from the Naval Medical School Hospital, Washington, D. C., and ordered to the Naval Academy.

Smith, C. W., asst.-surgeon, detached from the *Dubuque* and ordered to the *Nashville*.

Mackenzie, E. G., P. A. surgeon, commissioned passed assistant surgeon from Dec. 28, 1910.

Woodland, E. E., and Ledbetter, P. B., asst.-surgeons, commissioned assistant surgeons from May 4, 1911.

Malkin, G. M., acting asst.-surgeon, ordered to the navy recruiting station, Baltimore.

U. S. Public Health and Marine-Hospital Service

Changes for the seven days ended May 31, 1911.

Lumsden, L. L., P. A. surgeon, granted fifteen days' leave of absence from May 29, 1911.

Bahrenburg, L. P. H., P. A. surgeon, granted one month's leave of absence from June 1, 1911.

Edwards, George P., A. A. surgeon, granted thirty days' leave of absence from June 1, 1911.

Naulty, C. W., Jr., A. A. surgeon, granted eighteen days' leave of absence from May 31, 1911.

Thompson, W. R. P., A. A. surgeon, granted ten days' leave of absence from May 24, 1911.

Medical Economics

This Department Embodies the Subjects of Post-graduate Work, Contract Practice, Legislation, Medical Defense, and Other Medicolegal and Economic Questions of Interest to Physicians

THE LEAGUE FOR MEDICAL FREEDOM

Collier's Weekly, June 3, prints the following editorial under the caption: "Liberty":

> Protests from readers have greeted our criticism of the League for Medical Freedom. Also a protest is telegraphed from the California branch of the league. In the minds of most of those who protest, the principal objections are to the following positions taken by us: 1. That the league contains the kind of men who opposed the pure food act. 2. That the activities of the league are against public welfare and frequently surreptitious. Our answer follows:
>
> 1. B. O. Flower, one of the nine founders of the league, and now in his second term as president of it, was President of "the R. C. Flower Medicine Company" from 1885 to 1899. R. C. Flower is the notorious quack and general humbug whose latest arrest was as late as 1908. B. O. Flower wrote the league's pamphlets on "Bubonic Plague" and "The Compulsory Medical Inspection of School Children." His views on patent medicine are often expressed. For instance:
>
> > I believe that a great majority of the proprietary medicines are infinitely less dangerous to the public than the majority of regular doctors' prescriptions.
>
> 2. C. W. Miller, second vice-president of the league, was also one of the founders. In his newspaper, which publishes patent medicine advertising, he has constantly fought the medical profession. Last year one of his addresses against what he calls a "doctors' trust" was delivered to the Dairy Association in Baltimore. We may say in passing that *Collier's* does not believe in freedom to sell tuberculous milk any more than it does in freedom to sell tuberculous meat.
>
> 3. Mrs. Diana Belais, a director and also a founder, has appeared before in this paper as president of an anti-experiment society, a well-meaning, ignorant, reckless, and muddle-headed agitator. We are officially informed by the chairman of the "committee on publicity and education" of the league that Mrs. Belais was made a director "because of her courageous efforts to secure a higher law in New York State than the doctors' cruel theories and professional arrogance." Here's to anti-experiment, meningitis, diphtheria, and freedom!
>
> 4. Dr. C. S. Carr, who is on the advisory board, edits a pseudomedical sheet. *Collier's* long ago printed a letter signed "The Peruna Drug Company, per Carr." As editor of "Medical Talk for the Home," he carried advertisements of many of the medicines exposed in *Collier's* in our series on "The Great American Fraud." He is now editor of the *Columbus Medical Journal*, which he at once turned from an ethical sheet into a sheer fraud. Look at the issue of May, 1909. On the front cover is a picture of Carr himself writing: "All drugs are poison. All druggists are poisoners." On the reverse side is an advertisement beginning: "Prescribe Antikamnia and Codein tablets in la grippe, headaches, etc." Hurrah for freedom and Peruna!
>
> 5. George P. Englehard, who is on the advisory board, has for a long time in his journals [*Medical Standard* and *Western Druggist*] defended the patent-medicine interests.
>
> 6. Charles Huhn, also a member of the board, is a prominent officer in a cooperative patent-medicine concern.
>
> 7. Another founder was a member of the advertising agency which is now spending for the league the money which it puts into its advertising campaigns.
>
> The league says it did not oppose any "sanitary or quarantine laws." This statement requires some hardihood, as the hearings of the Senate Committee on Health, and more especially of the House Committee on Foreign and Interstate Commerce, show. It would interest us to know whether the league can point out a single health bill introduced in Congress which it has not opposed. When the leaders wish to oppose a sanitary or quarantine law they do it on the ground that such a law would *indirectly* "lead to compulsory and discriminatory legislation."
>
> The league was nominally born recently, but those who make it up had already as individuals, and even as organizations (such as the Colorado League for Medical Liberty) opposed State and National legislation. A pamphlet published by the Colorado branch singles out *Collier's* for attack, and was written by a notorious quack doctor. In California, which was the special theme of our former editorial, if the league should prevail, the next threat of bubonic plague would be carried out, instead of being suppressed like the last; small-pox might again become a serious epidemic; school children would bear their ills as best they might. A bill was introduced ordering that the Board of Health be composed of two "allopaths" (a school which does not exist but is a hostile term for regular physicians), two homeopaths, two "eclectics," two osteopaths. It did not pass!
>
> Some leading homeopathists and osteopathists, be it said, are in favor of a national health bureau and strongly against the agitations of the league. Dr. Francis B. Kellogg, president of the California State Homeopathic Society, in an address recently said: . . . "In my opinion there is an effort being made to exploit the homeopathic profession by influences and interests which are indirectly but radically opposed to the welfare not only of practitioners of medicine in general, but to that of humanity itself. I refer to the effort to enlist homeopathic support for the so-called National League for Medical Freedom."
>
> Plato complained that in his day doctors made too sharp a distinction between the body and the mind. In our day the best class of physicians frequently recommend faith cure and Christian Science, and the Emmanuel movement is an indication that it is possible for science and religion to work together in healing. Few mere observers rate the benefits that Christian Science has brought to the community more highly than we do. A belief which so frequently brings about an actual improvement in character, disposition, bodily health, and mental atmosphere, deserves the most serious recognition, even by those who regret its hostility to the progressive science of medicine. It is possible at times, for clever designers to use members of any faith for disastrous purposes. When R. C. Flower was at the height of his career, in 1907, as manufacturer of diamonds, vender of fake mining stock, wearer of most ingenious disguises, traveler under assumed names, and general artist in gold bricks, he conceived the idea of playing for profit upon the earnest beliefs of the followers of Mrs. Eddy. One of his accomplices, a woman, who also used an assumed name, worked the game with him, and when Dr. Flower, alias Mr. Cortland, took up the cudgels in defense of Christian Science, without being requested to do so, he said:
>
> > Not that I am one of its disciples, but I like to see every one FREE TO PRACTICE MEDICINE AS HE WISHES.
>
> Here we have the very words themselves from old Doc Flower. Up with freedom!
>
> Everybody who believes in "freedom" in medicine is within his natural and political rights in supporting this league. *Collier's*, not believing in this species of "freedom," is also within its rights in treating the league as a menace, the make-up, bias, and purpose of which ought to be fully understood.

THE TUBERCULOSIS BILL IN COLORADO

The Denver (Colo.) *News* for May 18 says, regarding the bill passed by the legislature requiring the registration of patients suffering from tuberculosis:

> The bill for the registration of tuberculosis is a bill to recognize facts, and deal with them as facts. It is a fact that tuberculosis is an infectious disease. It is a fact that every case of tuberculosis is caught, directly or indirectly, from some other case. It is a fact that the careless consumptive is a source of serious danger to the community. It is a fact that this danger to the community can be almost absolutely abolished by attention to a few simple rules of conduct; rules which make for the patient's comfort as well as for the community's health.
>
> The bill recognizes these facts. The bill seeks to safeguard the public health from the greatest and deadliest disease in the world. . .
>
> The opponents of the bill act as if it were a new thing in American legislation, and predict all manner of dire results which will flow from it, if it becomes a law. As a matter of fact, the bill is not new. . . . [It] is practically identical with the laws now in force in eighteen states; and some of these the most progressive states. California, Connecticut, Iowa, Illinois, Kansas, Maine, Massachusetts, Michigan, Minnesota, Missouri, New York, New Jersey, New Hampshire, Pennsylvania, Rhode Island, Vermont, Washington and Wisconsin have this law now. So has the District of Columbia. All told, 49,784,000 persons, or 54 per cent. of the entire population of our country, are living now under this law—and finding no inconvenience from it whatsoever. Talk about

the oppression the law will cause is idle in face of the fact that a majority of the American people have already tested the law, and found no oppression in it.

And wherever it has been in force for any considerable time, tuberculosis is beginning to retreat.

The liberty to transmit a wasting and destructive plague is hardly one of the sacred and inalienable rights of mankind.

MEDICAL LEGISLATION IN ILLINOIS

Since proposed medical legislation was reviewed in this department of The Journal, May 13, the Illinois State Legislature has adjourned, after passing the following bills:

S. B. 174, to create a sanitary inspection board to be appointed by the state food commissioner, to regulate sanitary conditions of creameries and food factories.

S. B. 235, to enable the State Board of Health to issue temporary licenses to senior students in colleges having a course extending over five years.

S. B. 263, to appropriate $20,000 per year to the State Water Survey for the purpose of investigating the public water-supply.

S. B. 264, to increase the number of state factory inspectors, and to provide for an additional physician on occupational diseases.

S. B. 422, to abolish the common drinking cup.

S. B. 475, to prevent goods, wares and merchandise delivered to any house in which contagious disease exists from being returned at any time to the seller of such goods, wares and merchandise.

H. B. 53, to provide compensation for municipal officers who furnish burial permits on certificates of death.

H. B. 55, to prohibit city councils from enforcing the tuberculin test on dairy herds.

H. B. 140, to provide for the equipment of a state surgical institution for children under 14 years of age.

H. B. 250, to provide for the protection of the public health by minimizing the causes of occupational diseases.

H. B. 434, to allow counties to erect and operate branch county hospitals.

H. B. 460-61, to empower the Chicago Board of Education to establish and maintain schools for deaf, dumb, crippled, blind, subnormal, dependent and delinquent children.

H. B. 642, to make an appropriation of $60,000 per year for the equipment, maintenance and extension of the College of Medicine of the University of Illinois.

The bill to establish a state sanatorium for consumptives failed to become a law; although a bill passed the senate carrying an appropriation of $100,000, and one passed the house, with an appropriation of $25,000.

H. B. 493, to provide for adequate registration of births and deaths, died in the house. Three attempts were made to pass this bill without success. Further consideration was postponed to a later day.

H. B. 608, which authorizes boards of education to appoint one or more school nurses "to have general oversight and supervision of the health of pupils in the public schools, to visit the public schools for the purpose of examining into the condition of health of pupils and to consult with teachers and parents regarding means of improving the health of pupils and the sanitary conditions of the public schools and to make recommendations to the board of education or the board of school directors concerning the result of such investigations," passed both houses but Governor Deneen has been asked by the State Board of Health to veto it.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

Delaware: State Society and Homeopathic, Dover and Wilmington, June 20. Secretary of the Medical Council, Dr. H. W. Briggs, Wilmington.

Illinois: Coliseum Annex, Chicago, June 13-15. Sec., Dr. James A. Egan, Springfield.

Kansas: Hotel Grund, Kansas City, June 13. Sec., Dr. H. A. Dykes, Lebanon.

Maryland: 1211 Cathedral St., Baltimore, June 20. Sec., Dr. J. McPherson Scott, Hagerstown.

Michigan: University Bldg., Ann Arbor, June 13. Sec., Dr. B. D. Harison, 504 Washington Arcade, Detroit.

Minnesota: State University, Minneapolis, June 20. Sec., Dr. W. S. Fullerton, 214 American National Bank Bldg., St. Paul.

Missouri: Gymnasium of St. Louis University, St. Louis, June 12-14. Sec., Dr. Frank B. Hiller, State House, Jefferson City.

New Jersey: Capitol Bldg., Trenton, June 20-21. Sec., Dr. H. G. Norton.

New York: June 27-30. Mr. Harlan H. Horner, Chief of Examinations Division, Department of Education, Albany.

North Carolina: Charlotte, June 14. Sec., Dr. Benjamin K. Hays, Oxford.

Pennsylvania: Regular, Homeopathic and Eclectic, Philadelphia and Pittsburg, June 27-30. Secretary of the Medical Council, Mr. Nathan C. Schaeffer, Harrisburg.

South Carolina: State House, Columbia, June 13. Sec., Dr. A. Earle Boozer.

Texas: Austin, June 27-29. Sec., Dr. J. D. Mitchell, Fort Worth.

Virginia: Richmond, June 20-23. Sec., Dr. R. S. Martin, Stuart.

Medical College Voluntarily Closed

The following letter has been received from Dr. J. M. Frankenburger, dean of the University Medical College of Kansas City: "At the last meeting of the Board of Trustees of the University Medical College, the following resolution was adopted. We dislike very much to close our doors but think it best to do so at this time, while we are in good standing in every respect." The following is the resolution:

> "The University Medical College, during the thirty years of its existence has endeavored to teach medicine according to the most approved methods and has always kept in the forefront of all advances therein. It has therefore been favored to a remarkable degree with the confidence of the medical profession, and points with much pride to the general character of excellence of its graduates and to the marked success and standing which they have held.
>
> "Medicine in the past generation has probably made greater advancement toward the goal of scientific exactitude than any other of the learned professions, and to it has been added a greater wealth of increased knowledge than has been achieved in centuries before. With these great achievements has arisen the necessity for much more highly educated men capable of mastering these enlarged fields of knowledge, and corresponding revolutionary advances in the standards and demands of medical education. Great laboratories with trained specialists in research lines who devote their exclusive time to research work and teaching have become an essential in the equipment of institutions which expect to remain in the forefront of future progress. These laboratories require vast sums of money for their equipment and maintenance to say nothing of the necessary salaries of expert teachers who in this work are shut off from the emoluments of private practice. In consequence the expense of educating a modern physician has in many of our leading institutions been found to run as high as $1,000 per year for each student. The tuition fees however are in few schools more than $250 a year, and in the University Medical College are only $100. To maintain its position in advanced medical education therefore it is evident that no school can be self-maintaining on the basis of its tuition fees as its only source of income. Such education is only possible where endowments are available. Such endowments are lacking in the University Medical College. Up to the present time our work has been equal to the best and to-day we are recognized by the Association of American Medical Colleges and by the Council on Medical Education of the American Medical Association, as one of the four standard schools of the State of Missouri.
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> "Such a rank and standing however can obviously not be maintained long in the future progress of medical education without endowment. Therefore be it resolved: That the trustees of the University Medical College of Kansas City, Mo., proud of its past, loyal to its many high-class graduates, and devoted to the highest interests of a grand profession, rather than suffer a lost prestige or accept any lesser position among the medical schools of America, do now in view of future necessities, and in the assurance of its present high rank, and for the good of future progress in medical education in Kansas City, and the State of Missouri, announce that with the end of the present teaching year it shall surrender its dearly loved privilege to those institutions financially able to meet the demands of future education in medicine."

The Anesthetist.—The anesthetist should be thoroughly skilled in local, venous, spinal, rectal and general anesthesia. He should be conversant with the minutest details in connection with all its branches, and be competent to carry them out. A special study should be made of the different drugs employed, more especially of the newer preparations. He will then be in a position to teach the student a subject which is of the utmost importance to the public at large.—*E. C. Ryall*, in the *Practitioner*.

Book Notices

The Social Evil in Chicago. A Study of Existing Conditions with Recommendations by the Vice Commission of Chicago (a Municipal Body Appointed by the Mayor and the City Council of the City of Chicago) and Submitted as Its Report. Chairman, Dean Walter T. Sumner, 117 North Peoria Street, Chicago. Paper. Pp. 368.

It is largely owing to the efforts of the medical profession that a new interest has been aroused regarding questions relating to sexual vice and a new sense of danger to the public welfare from the institution of prostitution has been excited. The problem is seen not only to involve a relaxation of public morals, but to threaten even the existence of the race. As a consequence of this increased interest, the so-called vice commission was appointed by the mayor of Chicago to investigate conditions in that city. In this investigation the medical aspects of the question were given due consideration and the commission contained in its membership five physicians whose advice and special knowledge were of great value. The general as well as the medical public naturally await with great interest the conclusions of this body which after long deliberation has now presented its report. This report is a book of 358 pages containing the conclusions of the commission with detailed statements of the facts on which these conclusions are based.

The commission availed itself to some extent of the work of previous investigators, but also gathered information as to local conditions at first hand by statistical and detective work, carefully verified, so that the conclusions are believed to be reliable. While the exact figures are chiefly of local interest, the estimates and conclusions which have been very conservatively drawn, cannot fail to be of value to other students of the problem. The vice conditions are essentially similar in all cities, but the vice of the large city draws so extensively on smaller cities and villages for support and patronage that it becomes, to a large extent, the vice of the country as well, and the disease engendered by this disgrace of civilization is spread throughout the land. Especially to the country physician who must often meet and care for the results of city vice, this distribution of the evil must be of special interest.

The practical conclusions of the Chicago investigation are summed up in a program which is expressed as follows: constant and persistent repression of prostitution as the immediate method, absolute annihilation as the ultimate ideal. For carrying out this program two agencies are proposed: the appointment of a morals commission and the establishment of a morals court.

The report deals in detail with the present conditions in Chicago. The exploitation of vice is shown to be a vast commercial enterprise involving about 5,000 regular prostitutes with a larger but unknown number of semiprofessional and clandestine prostitutes. The profits of this business are estimated at at least $15,000,000, annually of which a large share goes to the disorderly saloons, a considerable part to men who control and live on the unfortunate women, and a portion at least is used to secure protection from the law and influence political action. The relations of the evil with saloons, the police, economic conditions, especially the influence of poor wages, long working hours, and fatigue on the moral stamina of women, and the manner in which various places of amusement are made accessory to vice and contribute to the downfall of girls, are the topics of detailed discussion.

Among the remedial measures the commission includes the treatment of venereal diseases, the better supervision of homes, a revision of the criminal law, more skilful treatment of semidelinquent women, more rational treatment of the cases of arrested women, of the occasional prostitutes, of unmarried mothers, and more adequate provision for professional prostitutes.

In the report of the commission the medical aspects of the social evil are appreciated at their true value. It is not to be expected that such a work should afford any comprehensive treatment of this subject. The pathologic effects of the evil are plainly, but conservatively stated. The chief interest, however, centers in the medical methods of control proposed. These are:

1. Registration of venereal disease.
2. Segregation of the infectious.
3. Supervision of candidates for marriage.
4. Registration of births.
5. Compulsory treatment of the eyes of new-born babes.
6. Hospitalization of infected prostitutes.
7. Hospitalization of those innocently infected.
8. A study of eugenics.

In reference to venereal disease the discussion develops nothing new except the proposed extension of the powers of the health department and the apparent sanction of the commission to methods of individual prophylaxis. The report states:

"Under the police powers now granted by the state, except where specifically limited by statute, the department of health could quarantine persons when notified of venereal disease in them by physicians. To secure proper enforcement of this right, it should be specifically guaranteed by statute." "The health department should have the right to inspect prostitutes by a legal extension of the right granted to it to inspect other persons exposed to contagious disease. This will require an amendment of the statute which interferes with the logical right of the health department in this particular." The report evidently intends that these large powers shall be conscientiously and thoroughly exercised. The following is the program of examination:

"The examination of infected persons by the department of health should include: (a) physical; (b) laboratory; (c) gonorrhea by microscope; (d) syphilis, by microscope and Wassermann blood-test; (e) quarantine in hospital; (1) in homes when under age; (f) notifying of venereal disease to department of health; (g) names of all infected persons supplied to department of health."

That this is a large program cannot be denied. Logically it would apply to the infected male as well as to the female and it would be unjust and probably inefficacious to make a discrimination. At any rate such a program needs thorough education of the people to the dangers of these diseases before such measures for their suppression can find sufficient support to render them effective.

The apparent attitude toward medical examination of prostitutes and personal prophylaxis after intercourse is striking. It might have been expected that the timidity or prejudices of the lay members of the commission would have prevented the discussion of this somewhat tabooed subject or secured some condemnatory statement. We are glad to see that this is not the case. No thorough discussion of the subject is undertaken and *réglementation* is by no means officially approved. But there is evidently a fair recognition of the fact that prophylactic examinations may under proper regulations effect a diminution in the amount of venereal disease and the usefulness of certain methods of prophylaxis after intercourse is recognized. This is not to say that there is any minimizing of the value of moral and educational measures of prophylaxis.

The great importance of this report is hardly to be overestimated. It should form the subject of careful study and it is to be hoped that by the early institution of some of the measures recommended, the extent of the social evil may be considerably reduced.

The Anatomic Histologic Processes of Bright's Disease and Their Relation to the Functional Changes. Lectures Delivered in the Russell Sage Institute of Pathology, City Hospital, New York, during the Winter of 1909. By Horst Oertel, Director of the Russell Sage Institute of Pathology, New York. Cloth. Price, $5 net. Pp. 227, with 45 illustrations. Philadelphia: W. B. Saunders Co., 1910.

This is an unusually well-illustrated and well-printed book. The illustrations are partly colored pictures of pathologic kidneys and partly reproductions of microphotographs.

The book contains lectures delivered in the Russell Sage Institute of Pathology during the winter of 1909. They are interesting and give the results of extensive experience, and careful thinking; they are purely pathologic or as the author puts it, have to do with the "morphology of nephritis."

The author deprecates the use of the terms "parenchymatous," "interstitial" and "diffuse." He also regards as equally objectionable "the terms 'acute' and 'chronic,' for they not only do not describe with any degree of precision the time limit of nephritis or the rapidity of its formation and its progress but they have lost in the course of pathologic investigations any definite significance with regard to a particular process or group of processes." His classification of kidneys changed by Bright's disease may be summarized as follows: nephritis simplex is represented mainly by varying combinations of parenchymatous, degenerations and inflammatory edema but require no descriptive term such as "degenerativa" "exudativa," "hemorrhagica" and "prolifera," which describe varieties. "When in such kidneys, loss of parenchyma occurs with connective-tissue growth and vascular changes the term 'nephritis degenerativa et productiva' is used." The term "nephritis productiva" is used as synonymous with "interstitial nephritis." These forms of nephritis are described in detail and illustrated fully and well.

This book is interesting not so much for its descriptions as for its excursions into general pathology and physiology, as applied to renal diseases. For instance, the second lecture is largely devoted to a discussion of the different views of the functions and their relations to pathologic changes.

The excursions into the field of general pathology consider such subjects as degenerations, edema, inflammation, cardiac hypertrophy and other heart changes; arteriosclerosis and their relation to nephritis. The history of our knowledge of these subjects and the varied views held by pathologists are fully given and judiciously considered.

The author believes that many chronic cases of nephritis in middle and late life are due to degenerative changes in kidneys which were effected in early life by some infection and from which it was supposed that there had been perfect recovery. The possibility of the latter he doubts.

He also believes that tube casts are not of definite uniform character and derivation. "Epithelial cells, by granular disintegration and subsequent hyaline transformation can furnish material for their formation." "A colloid secretion is furnished by the epithelium and may produce casts or such a substance may be formed by degeneration and transformation of the cells and lastly both of these substances may fuse with an inflammatory albuminous exudate." He does not believe that cylindroids have the same origin or significance as casts.

Pathologists will enjoy this book, though they may not agree with its author in all things. Others who wish to inform themselves about pathology as applied to Bright's disease can find nothing better or more up to date.

CHOLERA AND ITS TREATMENT. By Leonard Rogers, M.D., F.R.C.P., F.R.C.S., Physician, Cholera Wards, Medical College Hospital, Calcutta. Oxford Medical Publications. Cloth. Price, $4. Pp. 236. New York: Oxford University Press, 1911.

This work reviews the history of cholera epidemics, including the recent prevalence of the disease in Russia. The causation, pathology and clinical description, including diagnosis and prognosis, are discussed in separate chapters, but the chief interest of the work centers in the final chapter on treatment. The author shows that the mortality has maintained a high figure, approximating 60 per cent. under all previous forms of treatment. This mortality has been reduced, according to Rogers, to 23.3 per cent. by the use of intravenous injections of hypertonic saline solutions and the administration of permanganates by mouth. The book, while not of immediate practical value to the majority of physicians, will be read with interest by those who desire special information on this subject.

A MANUAL OF [illegible] By Thomas Watts Eden, M.D., C.M., Edin., F.R.C [illegible] Physician with Charge of Out-Patients, and [illegible] and Gynecology, Charing Cross Hospital. Cloth. Price, $5 net. Pp. 632, with 272 illustrations. Philadelphia: P. Blakiston's Son & Co., 1911.

This book, while not complete, is a valuable contribution to diagnosis and treatment in general gynecologic disorders. The author has outlined the pathologic teachings on endometritis up to the present and has indicated the significance of the blood-count in inflammatory conditions of the pelvis. In cases in which the etiologic factor is positively determined, he recommends the employment of bacterins, especially in gonorrheal infections. In the treatment of procidentia he clings to the questionable procedure of ventral fixation, although under the vaginal technic he describes the vaginal operation and its limitations. Eden gives the old Emmet technic for complete lacerations in detail but omits to mention the advantages which are gained by the Tait operation. The description of the operation for retroflexion is extremely valuable. The indications are given for conservative operative procedure, and the symptomatology of uncomplicated retrodeviations of the uterus are recognized. The limitations for the Alexander-Adams operation are definitely stated, and the advanced views on this subject are given.

DIE AKUTE POLIOMYELITIS BZW. HEINE-MEDINSCHE KRANKHEIT. Von Dr. Ivar Wickman, *Privatdozent am Karolinischen Institut zu Stockholm.* Paper. Price, 5 marks. Pp. 108, with illustrations. Berlin: Julius Springer, 1911.

This monograph of 108 pages is an unchanged reprint of the section with the same title from the "*Handbuch der Neurologie*," edited by M. Lewandowsky and published by Springer. The various phases of the disease are considered carefully and fully, especially the symptomatology and the epidemiology and full notice is taken of the recent work on the etiology. This is probably the best discussion of the epidemiology that we have; the rôle of abortive cases and healthy carriers in spreading the disease is clearly shown in the author's study of Swedish epidemics. At the end is a good bibliography. The name *Heine-Medinsche Krankheit* was suggested by Wickman some years since in order to include under one term all the forms of clinical disease caused by the virus of acute poliomyelitis; the spinal, the bulbar, the encephalitic, etc. It does not seem at all necessary to introduce this name into English literature. Indeed, it may be doubted whether its introduction will ever serve any real useful purpose.

LANDMARKS AND SURFACE MARKINGS OF THE HUMAN BODY. By L. Bathe Rawling, M.B., B.C., F.R.C.S., Surgeon with Charge of Out-Patients, Demonstrator of Practical and Operative Surgery, Late Senior Demonstrator of Anatomy at St. Bartholomew's Hospital. Fourth Edition. Cloth. Price, $2 net. Pp. 96, with 29 illustrations. New York: Paul B. Hoeber, 1911.

This is a very neat and comprehensive little volume of about 90 pages. Most of the illustrations are from the justly popular retouched photographs, while certain necessary outline diagrams are added where they can better elucidate the subject. The text is strictly limited to the scope expressed in the title, and the author has shown considerable restraint in carefully avoiding any suggestion of surgical application of the abundant material furnished, contenting himself with adhering to the original special purpose and maintaining the handy size of his volume. It is a very convenient book for the student and the busy practitioner.

MANUAL OF CYSTOSCOPY. By J. Bentley Squier, M.D., Professor of Genito-Urinary Surgery, New York Post-Graduate Medical School and Hospital, and Henry G. Bugbee, M.D., Instructor in Genito-Urinary Surgery, New York Post-Graduate Medical School and Hospital. Morocco. Price, $3 net. Pp. 117, with illustrations. New York: Paul B. Hoeber, 1911.

This is an admirable primer of cystoscopy, worthy of recommendation as a truthworthy guide to beginners in the inspection of the vesical walls. Both text and illustrations are instructive.

Medicolegal

Circumstances Under Which a Patient Cannot be Charged for Services Rendered at Another's Request

The First Appellate Division of the Supreme Court of New York in Edson vs. Hammond (127 N. Y. S. 359) reverses a judgment for services recovered by the plaintiff and orders a new trial. It says that a brother of the defendant sought to have him adjudged a lunatic. To take charge of the medical side of the case he employed an alienist, who employed other alienists. The defendant, after a hearing, was committed to Bellevue Hospital, and was then transferred to a private sanitarium. At the latter, he became ill, and, although he had his own physician, the latter was not notified to attend him, but the alienist above mentioned called on the plaintiff to attend him professionally, he being informed that his new patient was accused of being a lunatic. The plaintiff found the defendant unconscious when he called on him, and, having made his diagnosis, was told by the alienist to continue his treatment of the case, which he did. The defendant remained unconscious about two days, and the plaintiff visited him professionally for about two months, making two blood and four urinary examinations.

It was conceded that the defendant never made any request that the plaintiff attend him, either to the plaintiff or to any other person, nor did the defendant promise to pay the plaintiff for his services, nor make any payment on account of his bill. Liability was sought to be predicated on the theory that, when a physician is called by a third person to attend a patient in a serious condition, he can recover from the patient when his services are accepted without objection, and that this is so even when the patient is unconscious and therefore not able to acquiesce. This proposition was sought to be sustained by two cases: Sceva vs. True, 53 N. H. 627, and Cotnam vs. Wisdom, 83 Ark. 601. The general rule deducible from these cases is thus stated: "Where a physician renders services to a patient, either under an express employment or with his consent, the law raises an implied promise on the part of the patient to pay him what the services are reasonably worth. So, *also, where in a proper case a physician* renders services to a person without his request or consent, or where one is injured by an accident rendering him unconscious, the law will imply a promise from him who received the benefit of the services to pay for them." 30 Cyc. 1596. The last sentence quoted rests on the authority of the Arkansas case, and of Pray vs. Stinson, 21 Me. 402.

But in the case before the court even the doctrine of the Arkansas and Maine cases would not warrant a recovery beyond the services rendered on the two days when the defendant was unconscious; nor would it seem to justify a recovery for physician's services rendered to one accidentally injured, even if rendered unconscious, where immediate attention is not required, and particularly in a city where a free ambulance service exists, and where free hospital treatment is furnished by the municipality. The natural course there to pursue is to call on the gratuitous service thus provided, and the rule founded on the necessity and humanity of other cases does not apply.

As to the other visits, liability was sought to be attached on the ground that the defendant did not protest against, or object to, the attendance of the plaintiff. To establish this liability, three things should have concurred: (1) The defendant should have known that the plaintiff was attending him professionally. (2) He should have been in such a condition, mentally and physically, that he was free to object or protest. (3) He should have either expressed his assent to the plaintiff's attendance or failed to object thereto.

As to the first requirement, it appeared that the defendant was constantly being visited at the sanitarium by physicians in the employ of his brother, engaged as alienists to examine into his mental condition. The names of nearly twenty such alienists appeared as having then visited and examined him, and the defendant said they all felt his pulse, looked at his tongue, examined the nurse's record and talked with him, many of them leaving medicine for him, and most of them wanting him to take medicines. He could not protest against their presence, for he was in restraint and under observation, even though he was allowed to drive out with his own attendants. There was no proof that he ever regarded the plaintiff as anything else than one of these alienists, whose visits he was required to receive. There was no proof that the samples of blood and urine submitted for examination were obtained with his knowledge, or that he knew of the use to which they were to be put. On this record, it cannot be said that the defendant ever knew that the plaintiff was attending him professionally.

As to the second requirement, the fact that the defendant was under restraint and that he was required to permit the visits of all these physicians, as well as his then mental condition, might furnish reason for his failure to protest. He was not told that his own physician was trying to visit him, nor did it appear that he had any knowledge that he was physically ailing. As to the third requirement, it was conceded that he never verbally ratified the plaintiff's employment, nor did he protest against the same, which is explained by the discussion of the two preceding requirements.

The court is not now concerned with the question of who may be responsible for payment for the plaintiff's services, save in so far as it is called on to determine that, on the record, the defendant is not responsible. Nor is the situation changed by cases holding that the professional privilege existed to a sufficient extent to prevent the divulgence of information acquired by a physician called in by a third party to attend a person in a comatose state.

Society Proceedings

COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION, Los Angeles, June 27-30.

American Academy of Medicine, Los Angeles, June 23-26.
American Climatological Association, Montreal, Canada, June 13-14.
American Medico-Psychological Association, Denver, June 19-20.
American Ophthalmological Society, New London, Conn., July 11.
American Otological Society, Atlantic City, June 26-27.
American Proctologic Society, Los Angeles, June 26-27.
American Surgical Association, Denver, June 19-21.
Arizona Medical Association, Los Angeles, June 26.
Conf. of Bds. of Health of N. America, Los Angeles, June 30-July 1.
Maine Medical Association, Augusta, June 28-29.
Massachusetts Medical Society, Boston, June 13-14.
Nat'l Assn. for Study and Prev. of Tuberculosis, Denver, June 20-21.
National Association for Study of Epilepsy, St. Louis, June 16.
New Jersey, Medical Society of, Spring Lake, June 13-15.
North Carolina, Medical Society of State of, Charlotte, June 20.
Oregon State Medical Association, Los Angeles, Cal., July 10.
South Dakota State Medical Association, Pierre, S. D., June 14-16.

AMERICAN GYNECOLOGICAL SOCIETY

Thirty-Sixth Annual Meeting, held at Atlantic City, N. J., May 23-25, 1911

The President, DR. REUBEN PETERSON, Ann Arbor, Mich., in the Chair

The Treatment of Placenta Prævia at the Sloane Hospital for Women

DR. EDWIN B. CRAGIN, New York: In the first 20,000 deliveries, cases of placenta prævia were treated by different methods: by Braxton Hick's version and using the half breech as a uterine tampon, or by gauze tamponade of the cervical canal and vagina, or by dilatation of the cervical canal by the Voorhees bags. In the later cases the method consisted of dilatation of the cervix and control of the hemorrhage with the largest Voorhees bag which could be introduced, i. e., No. 3 or 4, and, after good dilatation was obtained, either a version was done and the child delivered by the breech, or if the placenta prævia was lateral, or even marginal, with slight hemorrhage, and the vertex was presenting, the membranes were ruptured and the head allowed to come down and exert pressure on the lower uterine segment and the edge of the placenta, the delivery being expedited by the forceps, if necessary. This use of the elastic bag is extra-ovular, the membranes being kept intact until the bag passed the cervix and good dilatation was obtained. In the 5,000 later deliveries there were forty-nine cases of placenta prævia, fourteen complete, and thirty-five of the incomplete variety. There were two deaths among those of the complete variety, or 14.2 per cent., and two deaths in the thirty-five of the incomplete variety, or 5.7 per cent. In the 20,000 cases there were thirty-nine cases of complete placenta prævia with nine deaths, or 23 per cent., and 135 cases of incomplete placenta prævia with eleven deaths, or 8.1 per cent. The total fetal mortality was 51 per cent. in the second and 60.3 per cent. in the first series. Regarding the question of placenta prævia being an indication for Cesarean section, I have never met a case in which I considered it indicated.

Placenta Prævia

Dr. Edward P. Davis, Philadelphia: Of late our attention has been drawn to the value of intra-ovular pressure in placenta prævia by inserting, with suitable forceps, a good-sized bag through the membranes or placental substance, and by dilating this bag fully, thus controlling hemorrhage through pressure and hastening delivery. In partial placenta prævia treated with or without intra-ovular pressure by a dilating bag, the maternal mortality is not high. The high fetal mortality of placenta prævia, treated by vaginal methods, and the considerable maternal mortality, naturally suggest the possibility of delivery by abdominal section. The advocates of suprasymphyseal section urge its adaptability in these cases. In three cases of central placenta prævia in which I operated as soon as the diagnosis could be made out, the mothers recovered without incident; one normal child at term did well; the second child was a monstrosity, the third child, which was premature, did not long survive. There is, I believe, a close analogy between ectopic gestation and central placenta prævia. In both the cardinal dangers are those of hemorrhage and infection; in both palliative measures are insecure and unsatisfactory; in both operative treatment is our only reliable resource. In the present stage of our knowledge no method of treatment compares with abdominal Cesarean section in central placenta prævia, if the lives of both mother and child are to be considered. The mortality of abdominal Cesarean section in uninfected cases is now less than 2 per cent. in a large number of cases, and the fetal mortality in a considerable number is often nothing. A considerable amount of bright vaginal hemorrhage in a pregnant patient is always a dangerous symptom; and during the latter months of pregnancy, mother and child being previously in good condition, such hemorrhage should be considered as indicating a condition fully as critical as ectopic gestation. Such cases should be seen immediately by a competent obstetrician and a very careful examination made. Under favorable conditions delivery by abdominal Cesarean section should greatly improve the chances of both mother and child.

Analysis of Forty Consecutive Cases of Placenta Prævia

Dr. J. Clifton Edgar, New York: Ten of these cases were central, nine partial, twenty-one marginal. Seventeen were emergency ones. Seventeen were first seen at the onset of the bleeding; in twenty-three, the hemorrhage had lasted from a few hours to several days. Twenty-three cases only were exclusively treated by the hospital, the remaining seventeen had received various treatments before entering this hospital service. In twenty-nine cases the cervical dilatation was two fingers, or less when first seen. Treatment embraced cervical and vaginal gauze packing in thirty-two cases; de Ribes bags in three cases; Pomeroy bag in seven cases; bimanual dilatation as a primary measure in two, and following gauze packing in ten cases. Induction of labor in nine cases. The methods of delivery were: version and breech extraction in twenty cases; forceps in six cases; simple breech extraction in five cases; spontaneous delivery in eight cases; making, with one case undelivered. forty cases. Post-partum uterine tamponade in forty cases. Maternal mortality, 7.5 per cent.; infant mortality, 32.25 per cent.

The Best and Worst Methods of Treating Placenta Prævia

Dr. Henry D. Fry, Washington, D. C.: The best and the safest method to deliver a woman suffering from placenta prævia is purely an obstetric problem and its decision should rest with the expert obstetrician. Experience clearly demonstrates that maternal interests are guarded best by evacuation of the uterus as soon as the diagnosis of placenta prævia is made. Rapid dilatation of the cervix has no place in the treatment of placenta prævia, whether performed manually, by the Bossi dilator, or by vaginal Cesarean section. Version by the podalic method is never advisable unless uterine action has softened and dilated the cervix sufficiently to insert the hand. Slow delivery of the infant should be substituted for extraction. The artificial dilatation sufficient to perform bipolar version is comparatively safe, while that necessary for the insertion of the hand and podalic version is dangerous. After version has been accomplished, the leg, breech and body of the infant successfully plug the cervical opening and by pressure against the area of uteroplacental detachment prevents the further loss of blood. Bleeding being absolutely under control, every effort should be made by slow delivery to secure dilatation and thereby prevent laceration of the lower uterine segment. My rule is to discontinue anesthesia after having performed version and to hasten uterine action by rubbing the fundus of the uterus, and by encouraging the patient to make use of her auxiliary muscles to supplement the uterine force. The danger is not over with the successful termination of labor. The mother has yet to run the gauntlet of post-partum hemorrhage and sepsis. The proper application of the intra-uterine tampon of sterile gauze is a most valuable agent in preventing further loss of blood. Laceration of the lower segment of the uterus is a frequent cause of fatality in placenta prævia. The complication favors both hemorrhage and sepsis. The least dangerous obstetric interference is that necessary to perform bipolar version. The fingers do not come in contact with the danger zone but are passed through the internal os and directly within the ovular sac. Abdominal Cesarean section in placenta prævia is advisable in central placenta prævia complicated by an undilated cervical canal. Not only must the cervix be undilated, but the tissue must be hard and unprepared for artificial dilatation. This condition exists only in about 5 per cent. of all cases of placenta prævia, and is almost never met with in multipara. Contra-indications for abdominal Cesarean section are (1) excessive loss of blood before the opportunity arises for performing the operation, (2) a soft and dilatable cervix, and (3) a partial or marginal placenta prævia. Previous attempts to dilate and deliver the case by the natural passages; the use of gauze tampons and rubber bags to control hemorrhage, place such cases on the undesirable list, and if subjected to surgical skill, a Porro operation should be substituted for Cesarean section.

DISCUSSION

Dr. Richard C. Norris, Philadelphia: There are cases in which placenta prævia is best treated by abdominal Cesarean section, but the number will always be limited, probably about 5 per cent. of all cases of primiparæ. The ideal conditions for Cesarean section are a rigid cervix, a viable child, a mother who is a good surgical risk, and the diagnosis made at an early period. We must not, in order to save the child's life, which is problematical, sacrifice the life of the mother. The intra-uterine tampon to prevent post-partum hemorrhage must not only be intra-uterine but it must be placed firmly in the vagina so that the cul-de-sac is filled and upward pressure made to control bleeding.

Dr. J. Whitridge Williams, Baltimore: In cases requiring nothing more than rupture of the membranes I have used exclusively the Champetier de Ribes balloon. I have had no maternal deaths. A dangerous method of treating placenta prævia is by rapid dilatation, either with the fingers or with some instrument. In a number of cases I have been obliged to remove the uterus by abdominal section to overcome the damage done by this treatment. As to abdominal Cesarean section, the indications for it are so extremely infrequent that one can do without it, and I have not been able to see the justice of the mode of reasoning of the Germans who have been extremely enthusiastic over it.

Dr. Walter P. Manton, Detroit, Mich.: I have used all the methods advocated, except Cesarean section, and I do not recall having seen a case where I thought this operation would be applicable. In the last 1,989 cases of confinement at the Women's Hospital in Detroit we had nineteen cases of placenta prævia, and in only one was the placenta centrally implanted. In my own experience, I have never lost a mother with the methods that have been advocated. The infant mortality has been between 50 and 60 per cent. I have not had great success with the Braxton Hicks method of bipolar version, but by the use of the de Ribes bag and Voorhees bag my patients have come through safely, although the infant mortality has been high.

Dr. William S. Stone, New York City: I wish to mention a case of accidental hemorrhage in which I decided to do the vaginal operation after the patient was on the table, as the conditions were such that it was the easiest and quickest way to remove the contents of the uterus, and it proved to be such. I have never done vaginal Cesarean section for true placenta prævia.

DR. J. M. MUNRO KERR, Glasgow, Scotland: In domestic practice we can do no better than to do version by the Braxton Hicks method. That is the problem for the general practitioner. In the Glasgow maternity hospital we have tried chiefly two treatments—bipolar version and the treatment by bags, and so far our results have differed very little by the use of the two methods. We have, if anything, a little lower fetal mortality, and if anything, a slightly lower maternal mortality, but it has been very slight indeed, and consequently I can understand very clearly the attitude of those who support the use of the bag and bipolar version. But the real point of importance at the present time is the position of Cesarean section. This operation in domestic practice has a place in skilled hands, but I believe we have given it rather half-hearted support. There are certain cases in which Cesarean section is called for. They are: (1) The child must have reached nearly a full term; (2) the child must be viable and in good condition; (3) there must be probably a defect in delivery, either in regard to the pelvis, slightly small, or as regards rigidity of the soft parts; (4) it should be employed in women late in life who must possibly have another chance to bear a child; (5) the operation should only be employed where there has been danger of infection. If we give it out as decidedly our opinion that in cases of that sort Cesarean section is indicated, we would put the position of this operation on a proper basis, and in the future we might possibly be able to extend it or make its application less limited.

The Use of Iodin in Skin Sterilization for Surgical Purposes

DR. J. WESLEY BOVÉE, Washington, D. C.: So far as can be ascertained by culturing epidermic scrapings, weak dilutions of iodin, even to 5 per cent. of the official tincture, thoroughly sterilize the surface of the skin for a period of time lasting from two to fifteen minutes after its application. This inhibitive action of absolute alcohol is greatly enhanced by the addition of iodin to an equivalent of 5 per cent. of the U. S. P. tincture. Pubic hair placed in iodin dilutions of 5, 10, 20, 30 and 40 per cent. strength (of the official tincture), respectively, for 2, 3, 5, 8, 10, 12 and 15 minutes, respectively, all showed growths after three days' incubation, while using 50 per cent. dilutions under the same conditions practically always prevented growths. Control scrapings of skin taken from the abdomen above the umbilicus, over periods of time varying from two minutes to two hours when 40 per cent. dilutions were used, always showed negative results as to colonies. Cultures from hair and skin that had been subjected to 50 per cent. dilution of tincture of iodin never produced growths. Tincture of iodin diluted with an equal amount of absolute alcohol may be considered reliable as a local application in preparation of the skin or mucosa in any part of the body. Dilutions of less strength are unreliable, if hairs or large hair follicles are in the field of operation. The 50 per cent. dilution of tincture of iodin, if not carelessly applied, is not liable to injure the skin.

(To be continued)

ILLINOIS STATE MEDICAL SOCIETY

Sixty-First Annual Meeting, held at Aurora, May 16-18, 1911

The President, DR. A. C. COTTON, Chicago, in the Chair

Medical Service of the State Hospitals

DR. CHARLES F. READ, Watertown: The physical examination of patients extends from the crown of the head to the sole of the feet, may include pulse tracings, blood-pressure estimations, examinations of the ocular fundi, body fluids, etc., and is completed by a painstaking neurologic investigation. Spinal puncture has become a matter of routine in two or three of our hospitals, and is carried out at times in nearly all institutions. With the aid of this procedure we are accomplishing some surprising results in the matter of diagnosis. The report of a positive Noguchi together with an increased lymphocyte-count at once assures us that we are dealing at least with an organic case if not paresis. The mental examination begins not with the patient but with his progenitors, tracing back as many generations as possible, and not only taking into account the existence of actual insanity, epilepsy, alcoholism and imbecility, but also of neuralgias, tics, tramp life, fears, chorea, oddities, etc. After this, so far as possible, the patient's life history from early childhood on is obtained with a view of determining what manner of man has become involved in difficulties arising out of a lack of proper reaction to stress and strain. Turning to the patient himself, a study is first made of his reaction to the hospital environment, the value of which observations often depends on the proper interpretation of a single act or a half dozen words.

DISCUSSION

DR. L. C. TAYLOR, Springfield: A great deal has been done in the last few years since the adoption of the civil service law in regard to the state institutions. A few years ago the institutions of Illinois were looked on as custodial, and the treatment of mental conditions was hardly entered on at all. The establishment of the psychopathic hospital at Kankakee, a short time ago, gave a great impetus to those connected with state institutions. The establishment of this psychopathic hospital has given interns and physicians throughout the state the opportunity of going to that institution and studying under experienced teachers, not only psychiatry but also pathologic conditions. The mere fact that men working in the state hospitals can be promoted by competitive examinations has led to improvement in the service.

DR. HUGH T. PATRICK, Chicago: It is for the profession and the public at large to keep on sowing the seed and keep on upholding the hands of men who improved the public service in the insane hospitals. If people are not afraid to entrust members of their families to physicians outside of these institutions, why should they mistrust those who are at the head of these institutions—men who have the same conscience and the same earnest endeavor to do what is right and that which is best for these patients? It devolves largely on the profession to instruct the public that we have good state institutions, and that we have good men at the head of them.

DR. J. W. PETTIT, Ottawa: We must not lose sight of the fact that an organized profession of the state inaugurated the movement that made these things possible.

DR. CARL E. BLACK, Jacksonville: A new class of men sent to the state institutions are identified with the medical profession as they never were before, and they bring to us information we never received before. They are interested in their work. They are seeking these promotions. They are taking up the work with new enthusiasm, and with a new incentive. In that way the care of the insane, the study of insanity, is brought to the profession by these men by identifying themselves with our local and state medical societies.

DR. JULIUS GRINKER, Chicago: We must realize that the insane patient is a sick patient. Some physicians discourage the sending away of patients who need institutional care. The institutional man must come in contact with the medical profession in order to stimulate him to do good work, and the more closely we come in contact with them the more we appreciate their work and that of others, the better work we will get out of them. This movement is progressing not only throughout this country but everywhere. Psychiatry should be brought in touch with everything that medicine can bring to bear on it from all sides.

Experimental Transplantation of Legs

DR. V. D. LESPINASSE, Chicago: Blood-vessel anastomosis will not save every crushed limb, but it will save a great many that are now amputated. The crushed and contused portion of the blood-vessels must be removed. If one cannot bring the vessel-ends together after this has been done, the extremity must be shortened until approximation is possible. If the nerves are intact, the probability of success is increased as section of the nerves tends to vasodilatation, and hence stagnation of the blood-stream, thus predisposing to thrombosis.

A crushed limb should not be amputated without a careful examination as to the possibilities of resecting the crushed portion and replacing the hand or foot back on the stump.

Prevention of Blindness

Dr. Thomas A. Woodruff, Chicago: Preventable blindness is due to numerous and varied causes. The first steps have been taken toward suppressing one cause of blindness, namely, ophthalmia neonatorum, which for years resulted in more blindness, with the exception of optic nerve atrophy, than any other local affection. The public must be educated not only to the existence of ophthalmia neonatorum, and the terrible consequences that may result from its presence, but to the fact that it is preventable, and that their aid is necessary in securing such legislation as will make compulsory the use of such measures as will prevent this disease. Education in the movement may be carried on by means of a wide distribution of literature, leaflets and various forms of propaganda, photographic exhibits, lantern slides, press notices, magazine articles and public speaking before all kinds and grades of audiences. The statute books of many states contain laws relating to the prevention of ophthalmia neonatorum, but unfortunately these laws have become more or less of a dead letter, and an effort should be made requiring their enforcement. If this were done and a few prosecutions obtained for failure to adhere to the law, much benefit would be reaped in the fight for the prevention of blindness from ophthalmia of the new-born. Laws should be passed which would require state control of the blind. All cases of inflammation of the eyes in new-born babies should be reported by physicians and midwives. One of the most important factors in the suppression of the disease is the registering and licensing of midwives, for many of these women are hopelessly ignorant, dirty and careless, and that they play no small part in the effort to check this disease must be admitted.

DISCUSSION

Dr. J. W. Smith, Bloomington: These cases do not come to the specialist first-hand, but usually go to the general practitioner first, and for this reason this subject should interest the general practitioner the same as it does the specialist. We should emphasize the importance of antiseptic precautions at and during the time of parturition or labor.

Dr. A. L. Adams, Jacksonville: The solution of the problem appears to be one of education. People should know the facts, and I believe when they learn the possibility of prevention of blindness by a campaign of education, as has been done with tuberculosis, then these cases will receive early treatment which will result in the prevention of blindness in a large number of cases.

Dr. William H. Wilder, Chicago: It is a lamentable fact that many practitioners to whom such cases are referred either become rusty in their knowledge of the treatment of such cases, or they have never acquired it, because I personally know of many cases coming from practitioners who have not treated them correctly, and the result has been that a destructive ulcer of the cornea has occurred.

(To be continued)

OHIO STATE MEDICAL ASSOCIATION

Annual Meeting, held at Cleveland, May 9-11, 1911

(Concluded from page 1602)

Mucous Colitis

Dr. C. C. Fihe, Cincinnati: This is not a disease entity; it is the symptom and sign of a disease, the nature of which is not always identical. There may be all grades of pathologic changes within the mucous membrane of the colon. There is a great group of mucous colitis in which the cause lies in the pathologic conditions in and about the colon itself. Angulation of the colon has been the cause of many of my cases of mucous colitis, and the correction of the malposition by bandage or operation has been followed by a cessation of both constipation and mucous colitis.

Occasionally surgery must be resorted to. Adhesions are usually found at or near the site of angulation and again the end is accomplished.

DISCUSSION

Dr. A. M. Crane, Marion: Judging from my personal experience, most of the cases are sigmoiditis and proctitis. Most patients are neurasthenics. The treatment is varied. Cathartics should be avoided. Castor oil does well; olive oil gives good result, but the most relief is obtained from high colonic flushing with the rectal tube high in the bowel, with three quarts to a gallon of saline solution, to be followed by a 10 per cent. solution of argyrol, which is permitted to remain.

Dr. J. M. Rector, Columbus: Practically all my patients come as a result of constipation. In many there is a history of typhoid preceding the constipation. The cause of this constipation is the relaxation of the musculature of the colon with a lack of sufficient residue to make a stool. The feces become dry and stick in the folds of the bowel and little particles of stool are retained, and when they do come away the mucous membrane comes with them, and from that denuded place comes mucus. This also allows auto-intoxication and absorption, and in the secondary symptoms the constipation, which is the cause, is overlooked. I would criticize the application of the bandage, favoring rather exercise for the muscle. I do not think angulation has anything to do with the disease.

Dr. J. E. Griewe, Cincinnati: The causes in these cases are both mechanical and chemical. First, there is the result of absorption of chemical material, and later on the tremendous pressure from the accumulation of material. Mere regulation of the diet will not cure it. While angulations may be overestimated, they must not be neglected when they are found to any extent.

The Value of Drugs in Circulatory Diseases

Dr. H. B. Blakey, Columbus: I believe that the heart in pneumonia is injuriously affected by digitalis. Where there is a toxemia to combat digitalis merely increases the toxic condition against which the heart must work. In these cases the solution of the difficulty will be an antitoxin. Cardiac therapy in most cases is a fight against odds, and the utmost care and judgment must be used to avoid increasing the odds by too much drugging or drugging without an exact knowledge of how the result will be reached. Drugs should never be used to restore compensation when rest in bed alone will do it, except in those cases in middle or later life in which too long resting in bed may prove injurious. Attempts to hurry compensation in a badly decompensated heart only unduly weakens the heart, and a slow recovery is really more to be desired than a too rapid one. There is no therapy in heart disease as good as physical and mental rest, which should have as its object the giving of the greatest possible relief to the heart and the least possible disturbance to the patient. Digitalis should never be given, except where there is a dilated heart with a weakened systole. It should never be given in those cases in which the heart is combating a toxemia, except when the heart is dilated, and even then we must be sure there is no degeneration of the muscle fibers of the heart. Strychnin should be limited to those cases in which it is desired to slow the heart and increase blood-pressure. Alcohol has merit as a cardiac stimulant, but it should be given over a long period of supportive treatment, except in cases of those accustomed to taking the drug regularly. Caffein should only be given in those cases in which the desire is to increase the heart-rate as well as to increase the blood-pressure. The nitrates can in no way be considered as heart tonics or stimulants. Morphin can be used without fear of any deleterious action in any form of heart disease.

DISCUSSION

Dr. C. G. Hoover, Cleveland: I cannot agree that digitalis should never be used in pneumonia. Patients with pneumonia, as well as other infectious diseases, may have myocardial insufficiency, and one must rely on the size and transverse diameter of the right heart. When it is very rapid and shows a definite dulness on the right side, then is the time to use digitalis. Of course, not every patient should have digitalis, but the trouble is that it has not been given in sufficiently large doses. One milligram of strophanthin is the equivalent of 3 drams of digitalis, and yet one would not give it in 3 dram doses. Strophanthin is not indicated in all kinds of circulatory disease, but the single indication is myocardial insufficiency.

Dr. M. J. Lichty, Cleveland: The use of cardiac stimulants or cardiac tonics is not to be compared to the value of rest. It is hard to tell what remedy will do the work, and none can be depended on absolutely. Rest alone will not do everything, nor will drugs. The preparations of digitalis are many times disappointing, but they often help, in spite of the fact that the patient is going about.

Dr. N. R. Coleman, Columbus: While there can be no doubt that digitalis is one of the most valuable remedies in many cases of cardiac or cardiovascular diseases, it is not applicable in all cases. The conditions, circumstances and complications have all to be taken into consideration.

Nitrous-Oxid-Oxygen Anesthesia

Dr. Elmer I. McKesson, Toledo: As a routine anesthetic this surpasses any agent known when the proper technic is carried out. It may be successfully used in any operation that can be done under ether with few limitations.

Vaccine Therapy from the Standpoint of the General Practitioner

Dr. Louis W. Ladd, Cleveland: The indiscriminate use of vaccines by those ignorant of their power for good and evil is to be strongly condemned, as there are no more powerful poisons than bacterial proteids, and much harm may result from their injudicious use. Each case treated is a study in itself. Personal idiosyncrasies, variations in virulence in different strains of the same microorganism, etc., are conditions that cannot be predetermined, and must be worked out by careful experimentation in each case.

As a rule the best results with vaccine therapy have been obtained in the treatment of chronic local infections, though not infrequently brilliant results have been obtained in the treatment of acute local infections. Less satisfactory by far is the treatment of acute general infections. Vaccine therapy should not be used to the exclusion of other measures.

Rectal Feeding in Diseases of the Stomach

Dr. John D. Dunham, Columbus: A good nutrient enema is: Yolk of two eggs—300 calories; 30 gm. pure dextrose—1.200 calories; 5 gm. common salt; pancreated milk to 300 c.c. Rectal feeding cannot take the place of mouth feeding for any period of time, as subnutrition is the result. Therefore, rectal feeding has a limited field of usefulness and is not advantageous in esophageal or pyloric strictures. High enemata of normal salt solution are probably as beneficial as the usual nutrient enema. When used in uncomplicated gastric ulcer, nutrient enemata do not increase the acidity. On the other hand, when combined with total abstinence of food and liquids by mouth, the hydrochloric acidity is probably reduced. In gastric ulcer with relative *stenosis at the* pylorus, lavage and careful mouth feeding are better than rectal nutrients as method of treatment.

DISCUSSION

Dr. John P. Sawyer, Cleveland: The psychic influence of taking food has to be taken into account. The use of a large quantity of albumin, even in the form of peptone, is apt to cause bacterial decomposition in the rectum, and there is the end of usefulness of rectal feeding. The cleansing enemata and washing the bowel are often of use. The clinical benefit of giving a small food enema is not to be denied. It is of great help in carrying over a crisis but not of benefit in continued use. Rectal feeding sometimes proves a detriment in that it sets up a nervous excitement and bowel irritation.

Dr. M. Rosenwasser, Cleveland: In addition to the egg, I use malted milk, which contains sugar, and also have used dextrose and pancreatin. Rest and that will do the work.

The Surgical Aspects of Painful Indigestion

Dr. G. W. Crile, Cleveland: I have come to depend on certain phenomena and certain methods for the diagnosis. One of the most potent causes for confusion is the fact that whatever the disturbance of the body—whether the beginning of an acute infection, a physical injury of any part, a nervous strain, worry or fear, appendicitis, salpingitis, gall-stones, brain tumors—indeed, almost any disturbance of the body, it is at once reflected on the stomach as nausea, vomiting, anorexia, indigestion, etc. In the differential diagnosis of chronic appendicitis, one must consider ureteral calculi, neurasthenia, gall-stones, diverticulitis, and gastric and duodenal ulcers. Given a case of chronic painful indigestion, while the temperature and pulse may be normal, there is usually constipation, and an impairment of the general health. If in addition to the routine symptoms, there is a history of night attacks of pain at irregular intervals, gall-stones must be considered. If there is no hyperacidity, if the pain is referred rather to the chest and back, and there is a tender point between the tenth and eleventh ribs in the back, and pressure under the costal border when relaxed in a warm bath produces local tenderness and referred pain; if the kidney is negative to *x*-ray, a diagnosis of gall-stones or chronic cholecystitis may be made.

If the pains are distributed over the whole abdomen, constipation quite marked, frequently a single darting pain; if the ureters are negative for stone, and there is local tenderness when there is pressure on the appendicular region, and production of referred pain identical with that complained of; and if one makes deep palpation over the appendix at intervals of about four hours and there is an increasing tenderness, one may diagnose appendicitis. The latter method will often unmask a chronic appendicitis in ambush. Treating the left iliac fossa in precisely the same manner as a control, if there is chronic appendicitis there will usually develop after several vigorous examinations a definite and high degree of tenderness in the right fossa, while the left remains negative. The importance of this method cannot be overestimated. In chronic appendicitis there may be a certain amount of hyperacidity, especially if there is associated nervous strain. Gastric ulcer usually frankly announces itself, as by immediate distress on taking food, hyperacidity, free blood and, of course, hematemesis.

It is duodenal ulcer that gives the greatest interest. The frequency of this lesion has only recently been appreciated. There is no lesion that can with such confidence be diagnosed on the clinical history alone. There will be rhythmic periods of daily pain at certain intervals after meals. When the stomach is well emptied this burning, stinging or heavy pain appears, with scalding eructations and much gurgling of gas in the intestines. It wears away after an hour or two, but is almost immediately relieved by food. Lying on the left side sometimes gives relief. There is no vomiting unless obstruction has developed. A test meal shows the digestion to be good, food passing out of the stomach promptly, but the acidity is high. Local tenderness appears when the ulcer has penetrated the wall. The fact that there is pain in the region of the appendix, of the gall-bladder, of gastric and duodenal ulcer and no pain in lesions of the mucous membranes of the intestines is explained on the law of phylogenetic association. Pain is associated with the excitation of nociceptors, and these may take precedence over and dispossess the routine functions, such as peristalsis, secretion and absorption and their occupancy of their respective nervous mechanisms, just as fear does. This hypothesis readily explains the extraordinary improvement in the digestive functions and the general health following the removal of an appendix so slightly altered physically that only the clinical results in many cases could persuade one that this change could be an adequate cause for such far-reaching and important symptoms. It would also explain certain gall-bladder phenomena—indigestion, loss of weight, disturbed functions, etc.

The Renal Function in Surgery

Dr. Louis E. Schmidt, Chicago: Renal function tests are decried by those individuals who are not in a position to meet the exacting conditions or are not competent to carry on this work. In kidney surgery at the present time, collection of the urine from each kidney separately is absolutely essential. It is a well-known fact that operations carried out in any part of the urinary tract are attended by a mortality which is directly referable to diseased kidney function. For this reason, the necessity for testing the total renal function, or as it is often called, the combined renal function in these cases whenever considering operative interference, will become a recognized requirement. The differential diagnosis in cases of obscure abdominal disease can often be made and certainly assisted by the functional tests; also in cases of questions between renal and splenic tumors, or renal and hepatic enlargements, and cases of retroperitoneal inflammatory masses from appendiceal inflammations.

ASSOCIATION OF AMERICAN PHYSICIANS

Twenty-Sixth Annual Meeting, held at Atlantic City, N. J., May 9-10, 1911

(Continued from page 1681)

The Control of Epidemic Poliomyelitis

Dr. Simon Flexner and Dr. Paul F. Clark, New York: At present the chief reliance must be placed on preventive methods, and these are to be based on accurate knowledge. It should be accepted as a fact that epidemic poliomyelitis is a contagious, infectious disease, the cause of which can enter the brain and spinal cord by way of the nasopharyngeal mucosa, and can, also, be eliminated from the nervous system by this membrane. Attention should be directed toward proper isolation of cases of epidemic poliomyelitis, to the disinfection of the nasal and buccal secretions, to the proper supervision of nurses and other healthy persons coming in contact with the ill, since such persons have been shown to be carriers of the infection, and to the recognition and control of the slight and abortive cases of the malady from which further extension may be feared. That insects may be passive carriers of the infectious agent we have recently proved in respect to contaminated flies. That an antiserum for the virus of poliomyelitis can be secured is now established, but thus far no antiserum has been prepared that is suitable for therapeutic use. We have ascertained that hexamethylene tetramin possesses a certain power of neutralization of the virus of poliomyelitis in monkeys, and we have further discovered that this power can be enhanced by chemical modification of this drug. Whether the problem of the treatment of the disease is to be solved along this line of investigation cannot, of course, be predicted, but the outlook is distinctly hopeful.

DISCUSSION

Dr. L. A. Conner, New York: Have you any suggestions to make as to the preventive management of the nasopharyngeal mucous membrane?

Dr. S. Flexner: I have assumed that the disease ought to be dealt with now in the manner with which we deal with epidemic cerebrospinal meningitis. We know a number of simple substances which are aseptic disinfectants for the virus. A very good one is menthol and hydrogen peroxid. I think it is a virus which is sufficiently readily injured by means of disinfectants which are mild enough to be employed, that, if you consider it a proper and safe measure to use disinfectant solutions in atomizers you could carry it out. We have great faith in cleanliness of the nose, of the hands and of the clothes. I mean by that to keep them free from the secretion. The virus has never been found in the secretions of the nose of human beings, but the number of observations is very small. It is extremely difficult to get secretions from the human nose. We have had the best specialist in New York help us to get the secretion from the nose and failed.

Dr. F. P. Kinnicutt, New York: I would like to know the probability of the disease being contagious. Has Dr. Flexner any particular method of disinfection of clothing? Is it possible for any information to be given us in regard to the mode of using hexamethylene tetramin?

Dr. S. Flexner: The problem of disinfection is not peculiar. I should deal with it as with any of the rather highly contagious diseases. The reason I have suppressed the precise information about these compounds is that we have probably thirty of them now under comparison and we are going to choose the best one and it would not be fair to say now which it is likely to be because we do not know, but the point is that it is a possible line of advance.

A Case of So-Called Leukanemia

Dr. W. F. Hamilton, Montreal: The patient, a farmer, aged 43, previously healthy, noticed a mass below the left costal border, which increased in size; he lost appetite, weight and strength and grew pale. Examination showed a spleen which reached down to Poupart's ligament; the liver was 2½ inches below the costal margin in the nipple line. There was no ascites nor glandular enlargement. The leukocytes numbered 5,600 and myelocytes were present. The polymorphonuclear cells were diminished, while the lymphocytes and large mononuclear cells were greatly increased in number. The hemoglobin was 65 per cent. and the red cells 3,150,000. Death occurred about 2½ years after onset. No autopsy was made. This case was really one of atypical leukemia. The term leukanemia might well be discarded.

DISCUSSION

Dr. R. C. Cabot, Boston: What were the clinical features of the case aside from the blood?

Dr. W. B. James, New York: I wonder how many members feel perfectly satisfied with the recognition of such cases as this and those described as acute lymphatic leukemia as a distinct morbid entity? The term leukanemia implies the ordinary lymphatic leukemia.

Dr. W. F. Hamilton, Montreal: The clinical features were those of weakness, a slight pallor, no fever, moderately increased pulse-rate, no edema, an enormously large abdomen and a very greatly enlarged spleen over which one could feel to-and-fro movements. There was ascites, no pain or tenderness over the long bones. The peripheral lymph glands were not enlarged. The patient was in the hospital for four weeks and subject to x-rays and made little or no improvement.

The Possible Prevention of Pneumococcus Empyema by Hexamethylenamin

Dr. Frederick C. Shattuck, Boston: The lethal action of hexamethylenamin on the typhoid bacillus in urine, the general permeation of the body by this drug and the general delicacy of the pneumococcus, suggested that possibly empyema might be wholly or partly prevented as a sequel of pneumonia by the routine administration of the drug. Thus it has been used for the past year in nearly all the cases of pneumonia in my service in the Massachusetts General Hospital and in some of those of my colleague, Dr. Gannett. The drug was given as soon as the diagnosis was established, in doses of 10 grains, three times a day and continued into convalescence. In only three out of fifty-nine of these cases empyema developed. During the same period forty-six patients were treated without hexamethylenamin, only one developing empyema. In the preceding year, of one hundred and forty-two cases of pneumonia without hexamethylenamin, in three empyema developed. Of thirty-four patients treated at the Johns Hopkins Hospital six developed empyema. Of thirty-five patients in the previous year without hexamethylenamin one developed empyema. At the Presbyterian Hospital in New York, of nineteen pneumonia patients taking hexamethylenamin, one had empyema. Of one hundred and ninety-three without the drug, five had empyema. These figures seem to show that this remedy is in no sense a preventive of empyema following pneumonia. Neither in the Massachusetts General nor the Presbyterian Hospitals did pericarditis develop in any case taking the drug, although it was noted in 4 to 5 per cent. at the Massachusetts and in 1.5 per cent. at the Presbyterian in those not taking the drug. Furthermore, the Massachusetts' records show that otitis media occurred in about 4 per cent. of the non-hexamethylenamin cases, in no instance in the hexamethylenamin series.

Renal Decapsulation in Chronic Bright's Disease

Dr. James Tyson, Philadelphia: A study of the four cases of nephritis treated by decapsulation shows that in no case was complete cure effected, notwithstanding the healthy appearance of the patients at certain times after operation. However, the operation is so serviceable in certain instances that it ought to be done more frequently. The conditions which demand it are stubborn persistence of symptoms causing great inconvenience or danger to life, such as permanent dropsy, uremia shown by convulsions or intense headache, anuria and large albuminuria. Operation should not be considered until medical treatment proves unavailing. It is also indicated in perinephritis. Contra-indications are an age of over 50, valvular heart disease with irregularity of action, extensive cardiovascular changes, or albuminuric retinitis.

(To be continued)

AMERICAN GASTRO-ENTEROLOGICAL ASSOCIATION

Fourteenth Annual Meeting held in Philadelphia,
April 19-20, 1911

(Concluded from page 1608)

The Treatment of Gastric Disturbances

Dr. J. Kaufmann, New York: Treatment requires correct diagnosis. The progress made in the reading of gastric analyses assists in directing treatment along the right lines. Aside from properly interpreting disorders of gastric function, we have to consider their pathologic meaning. There must be a differentiation of primary and secondary gastric disturbances. Among the latter, those caused by chronic appendicitis, cholelithiasis, etc., are much emphasized at present. While undoubtedly occurring, their frequency is greatly over-rated; and too much importance is given to this special etiologic factor, at the cost of others that are known as provokers of gastric disturbances. Every etiologic factor should be taken into account. At the same time, the condition of the stomach proper requires consideration, even in cases of secondary gastric disturbances.

Dr. John A. Lichty, Pittsburg, Pa.: Medical treatment is often instituted in cases of hyperchlorhydria and carried on for a long time, yet the patients still over-secrete, though they may improve so far as general health is concerned. Quite a number of these patients are improved or cured by surgical intervention, but there are still many that remain non-surgical and difficult to treat.

The Gastric Weak Line in Wounds of the Abdominal Wall

Dr. Robert T. Morris, New York City: Failure of union of the abdominal-wall wound apparently means a trophic disturbance, and this incidentally corresponds to the area of superficial sensory disturbance described by Head for the gastric zone. It is probable that irritation of the nerves of the stomach, referred to their respective segments of the spinal cord, is continued as an impulse to the superficial gastric area, which is commonly irritated coincidently with irritative processes of the stomach. (This article will be published in The Journal.)

DISCUSSION

Dr. J. C. Hemmeter, Baltimore: There are a great many presumptions in the hypothesis of Dr. Morris. We must first prove that the stimulus goes from the gastric zone to a segment of the cord from which this trophic nerve comes out.

Dr. L. W. Kast, New York City: I consider the idea of Dr. Morris a very happy one. It does not prove anything, but it attracts attention again to the viscerocutaneous reflex, as well as to the mutual reflex association between internal organs and certain areas of the skin.

Dr. S. J. Meltzer, New York City: I am surprised that the idea should not have suggested itself to Dr. Morris that the stimulus might not be a nervous but a chemical one. Surgeons experience that the stitches give way readily after operations on the bile-ducts, and it is possible that this may be not only due to bile, but also to pancreatic secretion.

Dr. A. G. Gerster, New York City: We face this problem, not only in the region of the epigastrium, but also in every other region of the body. I think that Dr. Meltzer's explanation has a great deal in it. Anesthesia alone is sufficient to disturb the pancreatic and gastric secretions so much that the entire chemical processes in the body are profoundly changed.

Dr. R. T. Morris, New York City: The fact that repair did not take place in a case in which there was irritation of the pylorus led me to the conclusion that there was a trophic disturbance of that particular group of nerves running from a certain definite segment of the cord.

A Case of Banti's Disease

Dr. J. Fuhs, Brooklyn: This patient was successfully treated by splenectomy, afterward passing through an attack of typhoid and an operation for appendicitis. She had a typical, characteristic attack of typhoid, differing in no way from such attacks in patients not operated on, with the exception of the blood-findings, which showed a rather high leukocyte count for a case of typhoid, and a relatively high polymorphonuclear leukocytosis. The reaction to the surgical interference during the course of the typhoid did not present anything characteristic, and her recovery was as rapid as could be expected in a patient not splenectomized.

DISCUSSION

Dr. J. C. Hemmeter, Baltimore: I, too, have a case of Banti's disease that has some very peculiar landmarks. This patient had profuse hemorrhage from the bowels, an ascites, a huge spleen, and cirrhosis of the liver. He has been operated on for appendicitis, and has had typhoid. The blood-picture in this case is typical of Banti's disease. Mallory has found in the portal veins of the liver typical splenic cells, which proliferate there almost like cancer cells. This is very striking evidence pointing to the fact that the spleen is really the starting point of the trouble, and not the liver.

Dr. J. Kaufmann, New York City: In a patient of mine some clinical facts pointed to the origin of the disease in the spleen. In all cases in which we can make out that the spleen is the primary seat of the disease, we should remove it. The blood-picture does not show anything typical. In our case, for instance, it was that of pernicious anemia.

Dr. J. C. Bloodgood, Baltimore: I have had six cases of Banti's disease. In three of these, splenectomy was done. Two of those operated on are living, and all three of those not operated on. If we had removed the spleen in the latter cases, the operation would have been regarded as showing perfect results. The treatment given those not operated on was rest, with arsenic and iron.

Dr. L. W. Kast, New York City: I believe it to be only a symptom-complex. The fact that it may be a syphilitic or a postsyphilitic condition should be borne in mind in making the diagnosis.

Dr. J. Fuhs, Brooklyn: Clinically, it is impossible to differentiate the symptom-complex of Banti's disease from cases in which, on examination of the spleen, tuberculosis or granulomata are found. I think that the hemorrhages and the blood-findings speak in favor of its being a toxemia. The Wassermann reaction was positive in two cases recently published.

The Relation of Symptoms to Pathologic Findings in Cancer and Ulcer of the Stomach

Dr. J. C. Bloodgood, Baltimore: In a case of ptosis of the stomach and colon, the first case in which I resected for ptosis, medical treatment did not decrease the residuum in the stomach, which amounted to 200 c.c. I resected a little beyond the pylorus to a point that would make a straight line of the greater curvature and of the duodenum, suturing the duodenum to the stomach according to the method of Kocher, and then turning in the end. Resection of the stomach for ptosis is the simplest resection, because there are no adhesions. Things are so relaxed that there is very little shock. This patient had no postoperative complications after thirty-six hours. He has been relieved of the stasis of material in his stomach and colon, causing constipation, and the diarrhea is also over. The operation has been done ten weeks, and the man has gone back to his work.

Another case was one in which we suspected cancer of the pancreas. On exploring the abdomen, we found a small nodule on the head of the pancreas. There was a large gall-bladder; and in the common duct I could feel this nodule. It was not a stone. The operation performed was one that I had advocated two years before. I made the point that you should also resect the duodenum, because it is impossible to imagine a cancer of the diverticulum of Vater that would not infiltrate the duodenum. Local resections of the tumor itself have been done without any success, owing to the fact that the cancer has been cut through. In this case, in which there were clay-colored stools before operation, bile appeared with the first stool, and the patient is gaining in weight, showing that the loss of the pancreatic secretion is not incompatible with a gain in weight.

DISCUSSION

Dr. J. Kaufmann, New York City: If the operation in the first case was performed merely on account of the location and size of the stomach, I do not believe that these are sufficient indications for any operative procedure. Tonus is very important in cases of the neurasthenic type, the inborn weakness of the nervous system giving rise to atonic conditions. In such cases, stagnation may occur periodically, but disappear again. So long as there is no obstruction of the outlet, this condition does not require operative procedure.

Dr. M. Einhorn, New York City: Gastroptosis, as such, is not at all important, and retention is almost never associated with it when it exists without any other condition at the pylorus.

Dr. J. C. Hemmeter, Baltimore: S. A. Matthews has shown that removal of the duodenum is almost as fatal as removal of both kidneys.

Dr. A. L. Benedict, Buffalo: The term gastroptosis does not mean a ptosis as the word is applied otherwise in pathology. It means that there is an atony or dropping down of the greater curvature. The word ptosis should be limited to the distinct dropping of a whole organ. A dilated stomach can be shrunk by methods of medical treatment.

Dr. Henry D. Beyea, Philadelphia: In 1898 I devised an operation for gastroptosis. The procedure consists in simply shortening the normal ligaments. It is unassociated with danger, and is not mutilating.

Dr. J. C. Bloodgood, Baltimore: The indication in this case was the fact that the patient had residuum. Extreme degrees of ptosis may be present without producing symptoms, and considerable symptoms may occur with but slight ptosis. My case was not one in which I should wish to try suture of the ligament alone.

Neuromuscular and Secretory Coordination Between Stomach and Duodenum

Dr. J. C. Hemmeter, Baltimore: Secretion in the duodenum is not augmented by the presence of hydrochloric acid on the stomach side of the sphincter pylori. The hydrochloric acid or its derivatives must enter the duodenum. There is a periodic undulatory secretion of the intestinal juices in the fasting condition. Psychic secretion of pancreatic juice occurs in man. Jejune or fasting peristalsis (Pawlow and Boldyreff) occurs in the human being, probably as a means of evacuating products of excretion. This cannot be observed by the bismuth and *x*-ray method, because the digestive tract is not empty when bismuth is given. Observations on duodenal and ileocecal fistulas show it, however. There is a relation between the presence of bile and pancreatic juice in the fasting stomach to (a) disturbance of reciprocal intervention between the sphincter of Vater and the gall-bladder in enteroptosis, and (b) the normal jejune or fasting peristalsis of Pawlow and Boldyreff.

The Function of the Duodenum

Dr. L. Kast, New York City: The bulbus duodeni frequently shows food retention, which can be seen on the fluoroscope, if bismuth is mixed with the food. The food-retention is often associated with altered peristalsis of the pyloric portion of the stomach, and is the explanation for a variety of subjective gastric symptoms. The duodenal food-retention has a diagnostic significance.

The Cause and Relief of Pain in Duodenal Ulcer

Dr. James T. Pilcher, Brooklyn: As the result of observations in 100 cases of ulcer of the duodenum that were diagnosed and the diagnosis confirmed by operation, and also of some experiments on dogs, I have reached the conclusion that ulcer of the duodenum reflexly excites a hyperacidity of the gastric juice; the maximum amount of secretion of hydrochloric acid in the stomach is due to a direct chemical action (hormones), and is at its height from one to four hours after meals; it passes into the duodenum as hydrochloric acid, there being no food four hours after meals for it to work on; and it does not excite a flow of the duodenal juice directly, and is not neutralized by the small amount present. The relief of pain in duodenal ulcer follows the ingestion of any substance into the stomach, which neutralizes the acid gastric juice. Food taken into the stomach excites at once a reflex secretion in the duodenum; the duodenal secretion is alkaline in approximately the same degree as the gastric juice is acid; and this secretion is of sufficient quantity and concentration to neutralize the hydrochloric acid of the gastric juice.

Six Cases of So-Called Larval Hyperacidity

Dr. Julius Friedenwald, Baltimore: In the larval hyperacidity, there is an actual hyperacidity, which is often not revealed; inasmuch as the gastric contents are not extracted early enough, for the secretion, which at an earlier period would present a hyperacidity, is gradually neutralized before the end of an hour when taking an Ewald test-breakfast. Observations over a series of six cases have been made. Test-meals were given, and removed at varying intervals; and while the percentage of free hydrochloric acid was normal and subnormal at the end of an hour, after an Ewald test-breakfast, yet it was found that there was a period in which a hyperchlorhydria was manifested.

Gastric Hypersecretion

Dr. Arthur F. Chase, New York: The results obtained from more than 200 tests throw light on the extent to which secretion is influenced by motility, and suggest that in cases of disordered motility the dry test-meal is a more accurate index of the secretory function of the stomach than is the wet. The rôle of fatigue in gastric function is important.

A New Test Breakfast

Dr. Dudley Roberts, Brooklyn: This meal consists of lactose added to weak tea to the strength of 10 per cent. After the lapse of one hour, a portion of chyme is extracted, and water in known amount is added; and a second extraction is performed. By the Mathieu-Raymond formula, the total residue is calculated; and by the estimation of the lactose present, the amount of test-meal remaining is accurately determined. The estimation of the lactose in such a solution is simple. It would seem that the method, because of its simplicity and accuracy, might be worth general adoption.

The Benzidin Test for Occult Blood in Diseases of the Digestive Organs

Dr. F. W. White, Boston: The Schlesinger and Holst modifications of the benzidin test have been used in several hundred cases. I do not consider this test over-delicate, a large majority of negative results having been obtained. In feces, positive results were obtained only with ulcerative lesions of the gastro-intestinal tract and in hepatic cirrhosis. The benzidin test has many advantages over the guaiac test.

DISCUSSION

Dr. Albert Bernheim, Philadelphia: Within the last few weeks, I have tried a new test with fluorescein, which acts in the same way as phenolphthalein, and is more delicate than the latter in some cases.

Dr. Dudley Roberts, Brooklyn: I have come to the conclusion that positive findings are of great value in the benzidin test, though negative findings indicate comparatively little. Several times I have been much confused because patients have taken hemoglobin preparations, and I now guard against that source of error with great care.

Dr. J. Fuhs, Brooklyn: In testing for blood in the stomach contents, I always test the saliva also for blood. If one adds benzidin to stomach-contents, it seems to have the property of liquefying mucus.

Dr. A. S. Benedict, Buffalo: I have found several cases in which the occult blood in the feces came from a spot but 10 inches above the anus.

Dr. F. W. White: I think that both the positive and the negative findings have a good deal of value. If, in patients who have suspicious symptoms, I find no occult blood after they have had time to develop cancer, I consider this good evidence against the existence of malignant disease. Positive results in the feces mean a good deal more than the same results in stomach-contents.

Lymphocytosis in Certain Gastro-Intestinal Cases

Dr. John P. Sawyer, Cleveland, Ohio: In practically all my cases, for several years, a differential count has been made, and in the course of these observations I have often found the differential count of clinical advantage. A slight variation from the average lymphocyte-count is not of considerable moment; but when the count rises to 40 or 50 per cent. this is probably indicative of a considerable departure from the usual blood formation. These large lymphocyte counts are found without leukocytosis in a considerable number of diseases; among them, cases of gastro-intestinal disease. It occurs in cases in which gastro-intestinal catarrh is not discoverable by the test-meal or the stool; and in which the history shows no record of the existence of such catarrh recently. The condition of the gastric secretion seems to have no determining influence on this lymphocytosis. It is usually found in persons whose resistance is low. In such cases it is possible, by treatment of the patient, to bring about a very rapid and decisive change in this lymphocytosis. This treatment consists in the administration of iodid of iron for a few weeks and the exhibition of arsenic. This treatment brings about a prompt reduction in the lymphocyte-count, and the patients gain rapidly in weight and strength.

DISCUSSION

Dr. S. T. Meltzer, New York City: I have come to the conclusion that there is a difference in the ferment between the leukocytes and the lymphocytes. One acts in alkaline, and the other in acid media; and I thought that there might be some sort of definite relation between certain conditions of acidity and lymphocytosis.

Is Pellagra a Disease Primarily of the Alimentary Tract?

Dr. J. C. Johnson, Atlanta, Ga.: Gastro-intestinal symptoms are usually the first to appear in pellagra, and are in proportion to the gravity of the attack. There is an absence of hydrochloric acid in advanced cases; and in many, a lack of ferments. The patients were treated successfully with chlorid of potassium, tincture of iron, and essence of pepsin.

DISCUSSION

Dr. S. J. Meltzer, New York City: The fact that the serious cases of pellagra had no hydrochloric acid, and that the cases that had hydrochloric acid had no serious symptoms, would indicate that the cause of the disease is of a kind that has to pass the stomach and that if hydrochloric acid is present in the stomach, it does not develop.

Dr. A. S. Benedict, Buffalo: There is absolutely nothing specific or in the nature of an entity about pellagra. Cases of it are nothing but ordinary senility, insanity, skin-eruptions of various kinds, and all sorts of toxemias.

A Case of Voluntary and Intentional Regurgitation

Dr. Albert Bernheim, Philadelphia: The patient can regurgitate food voluntarily and intentionally, whenever he desires to relieve symptoms of gastric distress. He usually takes a glass of water, to liquefy the contents of his stomach, so that they may come up easily; and also takes some bicarbonate of soda, so that the acidity of the regurgitated material may not injure the mucous membrane of the throat and mouth. He then bends over, so that the abdominal muscles compress the stomach. The esophageal opening of the stomach then dilates, and the food comes out.

DISCUSSION

Dr. L. M. Gompertz, New Haven, Conn.: I had a patient who was able to regurgitate his food. On one occasion, he had a complete case of reversed peristalsis, vomiting turpentine five minutes after it had been given by enema. He recovered from this attack without treatment.

Mitral Murmurs in Gall-Stone Disease

Dr. David Riesman, Philadelphia: In a number of cases of gall-stone disease, a mitral systolic murmur is audible during and shortly after an attack of colic. These murmurs are perplexing when the advisability of operative treatment is to be weighed. In all the cases seen, the murmur had not existed prior to the attack of colic. It is not due to endocarditis, for it disappears soon after the attack. It is not due to anemia, nor is it due to jaundice, for it can be heard in cases that do not have icterus. It probably depends on temporary dilatation of the heart. I believe that the chronic disease of the biliary tract, with its accompanying infection, causes a myocardial degeneration, somewhat analogous to that found in connection with fibroid tumors of the uterus. The degeneration predisposes the heart to dilatation when, during attacks of colic, the blood-pressure rises. The murmur is loud and unmistakable; the heart is enlarged, but not to any great degree. The murmur is no contraindication to surgical intervention. Indeed, if the pathogenesis is as stated, it constitutes a point in favor of operation. Care should, however, be taken with the anesthesia.

DISCUSSION

Dr. S. J. Meltzer, New York City: It sometimes happens that there is a murmur in association with pain so excruciating as to lead one to believe it due to some trouble with the gall-bladder; while actually this pain is a symptom of angina pectoris. I have no doubt, however, that in Dr. Riesman's cases there was definite evidence of gall-stones.

Dr. J. Fuhs, Brooklyn: I have seen two cases of distinct biliary colic with asthmatic attacks in patients who had never had any asthmatic attacks before the attack of cholelithiasis, and never had one afterward. There was no functional or or organic disturbance of the circulatory organs either before or after the attack of gall-stones.

MEDICAL ASSOCIATION OF GEORGIA

Sixty-Second Annual Meeting, held at Rome, April 19-21, 1911

(Concluded from page 1604)

What Has Been Done in Georgia Against Hookworm Disease

Dr. A. G. Fort, Lumpkin: The disease has been demonstrated as heavy in fifty counties, light in twenty-five counties and as only demonstrated in fifty-two counties. To ascertain what percentage of suspects really had the disease we watched quite a number of specimens and found that an average of 74.1 per cent. of the suspects were really infected. We believe that hookworm exists in every county in Georgia and expect to demonstrate it in a short time. In the eradication of this disease the enlistment of the physicians in the various sections of the state is indispensable, next is the cooperation of the people so that they will present themselves for treatment, and finally finding means for the treatment of the indigent. We depend on the physicians of the state to treat the hookworm disease. We have sent to each physician bulletins on hookworm disease and we have also sent letters to each physician in the state. We have appeared wherever it was practical before the district and county societies, and our inspectors have visited hundreds of physicians personally making an effort wherever possible to enter into the technic of the examination by means of the microscope. We have endeavored to get the cooperation of the people by giving lectures, by talking to parents whose children present evidence of infection, by giving talks to school children and by notifying each parent whose child is suspected of being infected and by sending to the parent bulletins stating the cause, nature and prevention of the disease, and the methods to be followed in securing a cure. In every section we have endeavored to see that a few typical cases have been treated in order that they might be an object lesson. As another means of getting the cooperation of the people we have used the press, having visited 102 editors and secured for publication 169 articles. The matter of providing treatment for the indigent is a perplexing question. The final task in the work of eradication is the stopping of soil pollution. This is a work of education and will require a great length of time. About 83 per cent. of the people in the state of Georgia live in the country and soil pollution is generally practiced, with no thought of the serious consequences. Outside of the cities and towns a large percentage of the people have no privies at all. The farmers are beginning to realize their importance and are asking for plans and specifications.

We have during the last twelve months visited seventy-five counties, examined 419 schools with an attendance of about 40,000 and found about 10,000 suspects. We have made 4,472 microscopic examinations and found 2,205 positive. We have reported as treated about 10,898 persons. We have delivered 400 lectures, many of them illustrated.

A Simple Technic in Gynecologic and Obstetric Perineal Repair

Dr. R. R. Kime, Atlanta: By the buried suture the principles of the Emmet operation can be carried out equally as well if not better than in the denuding process and by a far simpler and quicker technic. I have been advocating this method of perineal repair for fifteen or twenty years. The longer I practice it the more I am convinced of its utility, efficiency and simplicity. If the flap is properly elevated, either or both vaginal sulci, anterior fibers of levator ani, pelvic fascia, sphincter ani, when lacerated, and the perineal structures proper can be approximated forming a good firm pelvic floor and as large a perineal body as is desired without destruction of tissue, which is a factor of importance in many cases. Scar tissue should be removed. It is best to conserve the vaginal tissue, especially if the patient is likely to have more children. The flap protects the sutures, lessens chances of infection and prevents the formation of pockets in vaginal sulci, lessens collection of lint from dressings; if infection does occur superficial stitches can be removed without complete separation of the parts. In obstetric work the same principles apply except that the parts are already denuded for suturing. All that is needed for the operation is a needle holder or artery forceps, scissors, No. 2 plain catgut and a small, full curved needle with a large eye. This method does not require an expert anatomist for hairsplitting dissections of the various individual muscles of the perineum.

DISCUSSION

Dr. W. W. Battey, Jr., Augusta: In all operations for the repair of the perineum we must have in view two facts, the necessity for support for the pelvic floor and for the rectocele. The operation employed by Dr. J. Riddle Goffe of New York is one of the best we can use. The repair can be accomplished in about fifteen minutes and the technic is very simple. The post-operative care of these patients is of as much importance as the operation itself.

Dr. J. R. B. Branch, Macon: With regard to the post-operative care of these patients, they are left, as a rule, in the hands of a nurse and the ultimate success of the operation remains in her hands. One question that arises is whether to use a catheter or not. If the nurse cleans the perineum, dusts it over with aristol (thymol iodid), and then catheterizes the patient, the sutures may hold well. It is better, however, in many instances not to institute catheterization until we are sure that the sutures will hold. The bowels should be thoroughly cleansed out before operation and then a low diet given. The best results are then obtained by tying up the bowel. These patients do not need much nourishment. The bowels should be moved on the eighth, ninth or tenth day by means of an olive oil suppository, which should be given through the retention catheter. This catheter should have been introduced into the bowel, sutured there, to permit of the escape of gas.

Dr. R. R. Kime, Atlanta: I wish to emphasize the importance of using the buried suture in these cases. I have never been able to get successful results otherwise. The suture should be one that is absorbable. If the knot is left in the rectum there are chances of infection from the rectum and this can be avoided by the method that I propose.

Tuberculosis Among Insane Negro Women

Dr. N. P. Walker, Milledgeville: These 265 cases do not represent selected cases and the period of observation extends over five and one-half years. Within the past five years the sanitarium has received 4,496 patients of whom more than 90 per cent. were between the ages of fifteen and ninety. For the registration area it is stated that 84 per cent. of people dying of the disease succumb between the ages of fifteen and seventy. In a sane community only about 61 per cent. are within these limits. One of the chief local etiologic factors is the crowded conditions of the wards. The normal capacity of the main building for negro women is 310 and the average number accommodated is 420. Note was made of the sleeping quarters of seventy-four consecutive patients in 1906-1907 and it was found that the percentage was 130 per cent. higher among the patients from the dormitories than from regular rooms, and 170 per cent. higher among those sleeping in the day rooms. There are many difficulties in making an early diagnosis of tuberculosis among the insane. Many do not complain at all and it is quite impossible to obtain a reliable history, especially among the negroes. There were thirty-three cases of acute miliary and general tuberculosis, forty-four in the third stage of pulmonary tuberculosis, 123 in the second stage and fifty in the third stage. There was one case of polyserositis, two of enteric fever, five of adenitis and seven of pleurisy with effusion. There were many forms of complications presented. The treatment presented many obstacles. Many were indifferent to instructions and it is almost impossible to secure systematic regulation of rest and exercise. The open air treatment was begun in 1905. As for mortality, of the thirty-three cases of miliary and general, two with enteric and one of polyserositis, all died. Of five patients with adenitis, four improved and one died of other disease. Of seven with pleurisy with effusion, five recovered, one improved and one died of intercurrent disease. Of those with chronic tuberculosis in the third stage, thirty-seven died, six were furloughed not improved and arrest took place in one. Of 123 in the second stage, twenty-one were cured, twenty-six arrested and forty-one died. Of fifty patients in the first stage, twelve were cured, sixteen arrested. The influence of isolation and treatment on the death rate among colored women has been gratifying. In 1905 the ratio was 9,317 per 100,000; in 1906, 6,677, in 1910, 2,936 or one-third the rate of 1905.

The Colon Bacillus as the Principal Cause of Abdominal Diseases

Dr. Fenton B. Turck, Chicago: The virulency of the colon bacillus is now quite generally recognized. The degree of virulency can be determined by cultures taken from the ileum or cecum and fed to rats. Immunity, or partial immunity, can be established by the use of vaccines. Where the thyroid gland is deficient, the giving of thyroid extract will reduce the virulency. The symptoms are variable in different patients. The cultures taken from the lower ileum or cecum were taken from an area of the greatest bacterial activity. One-half to one cubic centimeter of a bouillon culture of non-virulent *B. coli* can be injected into the peritoneum of the rat without any marked effect, but if the virulency is well marked, death will follow. In the treatment of such diseases one should reduce the virulency of the *B. coli*; he should restore the stomach and intestines to their normal condition; by hygienic living, proper diet, etc., he should guard against recurrences. If the retention was of long standing, and the correction of dietetic errors and hygienic living, drugs, etc., do not avail, surgical means are required. This, however, only removes the effect and not the cause, and after-treatment is necessary to remove the causal factors. Lavage of the stomach with a weak solution of silver nitrate is necessary. Heat stimulation (hot water introduced into the stomach) is very beneficial to create antibodies and restore the muscle to functional activity. Lavage of the colon with water and air will excite peristalsis and act as pneumatic gymnastic exercise of the muscle wall of the colon. Liquid petrolatum enemas are of great value in cases of constipation. Some have recommended the use of *B. bulgaricus* as antagonistic to the *B. coli*, but others maintain it has no effect when taken with a mixed diet.

The injection of vaccines is of the greatest value. The cultures should not be taken from the ileum or cecum, as there the strain is most virulent. The cultures are injected into a dead fetal pig and grown in a serum pressed out from the fetal pig. In acute cases small injections are taken from three to five days apart; in the chronic cases larger doses are given but farther apart. In many cases where the mechanical physical means and vaccine and serum treatment are all negative, the use of the thyroid substance will be beneficial. Laxatives and purgatives are valuable for expelling the accumulated material from the bowel, but are of no permanent value. Those drugs which have the least irritating effect should be used. Antiseptics of all forms have little value, as they seem to increase the virulency of the *B. coli*. A few of the oxidizing agents, such as substances containing magnesia or iodin compounds, containing free oxygen that can be liberated, will promptly excite the antibodies in the blood. The diet regulates the bacterial contents of the intestines. Frequent changing of the chemical nature of the diet will prevent the establishment of any one type of bacteria in the intestines. The frequency of meals is of great importance. In many more time is required, because of the slow movement to clear the alimentary tract and give time for rest. Meat increases intestinal intoxication and should not be eaten oftener than once a day. Rice is one of the most easily digested foods, and least toxic in effect. It may be combined with extract free meat, into an easily digested, nutritious and inviting dish. Carrots, beets, parsnips, raw cabbage, celery, raw tomatoes, apples, are all good and may be used in various combinations. Irish moss and agar agar, cooked into a jelly and flavored, will do much to reduce the virulency of the *B. coli*. Lavage of the stomach and colon will notably have a beneficial effect but will produce changes in the chemistry of the blood. Hot baths have a like effect, but to a less degree. Exercise is an essential part of the treatment to be adopted in combating constipation.

Drinking Water with Meals

Dr. George M. Niles, Atlanta: There is a widespread idea that the habit of imbibing water or any other fluid as food is harmful. I believe it to be based on erroneous physiologic conclusions and promulgated more by tradition than by painstaking observation. Water does not to any extent permeate a mixed meal in the stomach and consequently cannot dilute or interfere with the potency of the gastric juice. Much water at meals is contra-indicated in gastroptosis, in patients with weak hearts or uncompensated valvular lesions, occasionally where there is a marked tendency to colic or spasm of the pylorus. Copious draughts of ice-water gulped down during fatigue or profuse perspiration are both unhygienic and dangerous. A large percentage of patients coming under my notice for poor nutrition, constipation, intestinal auto-intoxication and numerous other states of disordered digestion are those who drink no water with their meals, or very little. I enlisted the aid of sixteen young men of good physique and good digestion, each one accustomed to drinking one or two glasses of water with his meals. Eight of these young men were instructed to drink no water with meals, and only what was demanded to satisfy thirst between meals for a week. The other eight were instructed to drink four glasses of water with each meal and between meals to drink it as was desired. Of the eight who drank no water, all lost in weight, from eight ounces to two pounds, with one exception, and he remained at exactly the same weight as before. Each one complained of headache and more or less constipation. The eight who drank four glasses at a meal fared much better. All gained in weight from four ounces to two and one quarter pounds, except one, whose weight remained the same. Not one had headache, constipation or any digestive discomfort. The one who was constipated at the beginning found his bowels more regular.

DISCUSSION

Dr. E. C. Thrash, Atlanta: It has been my policy to curb thirst during meals, but otherwise to drink when inclined to do so. Drinking too much water is detrimental, and drinking too little water is also detrimental. It is better to drink the quantity of water that the system demands and not to go to extremes.

Dr. T. J. McArthur, Cordele: I feel sure that many people suffer from indigestion, supposedly the result of kidney trouble, when the real cause is a lack of a sufficient water supply to the system. My personal observation has been that it is not an advantage to take too much water with meals. I think the happy medium is to be found in taking two glasses of water with meals. One should insist on a definite quantity of water being taken during the twenty-four hours. We should not force the amount of fluid beyond the demand. Some people get the idea that water is unhealthful, and drink but small quantities of it. If they drank more and diluted the contents of the alimentary canal more frequently there would be less absorption of toxins.

Dr. J. R. B. Branch, Macon: It makes a difference whether liquids are taken in the beginning or at the close of a meal. The saliva plays a very important part in carbohydrate metabolism. If one chews his food thoroughly, he obtains the proper secretion of saliva; if a moderate amount of water is taken at this time no harm will result, but if large quantities are taken or the food is washed down with fluid the proper digestion of the carbohydrates is interfered with.

Dr. S. A. Visanska, Atlanta: One of the greatest arguments to my mind in favor of taking water with meals is that an infant artificially fed must have its milk diluted with water to the same degree as the mother's milk is. In infants we seldom find kidney troubles; the water seems to flush out the kidneys. So far as my experience goes, the taking of water with meals is beneficial rather than harmful.

Bacillus-Carriers and Their Relation to Public Health

Dr. K. R. Collins, Atlanta: Carriers may be divided into three classes: (1) Permanent carriers; this class is confined to such persons as have never had the disease which is produced by the organism for which they act as host. (2) Temporary carriers; those who come in close contact with a patient suffering with an infectious disease and acquire temporarily the organism related to the disease. (3) Persons convalescent from certain diseases who continue after complete recovery to maintain the organism causing the disease for varying periods of time. Among convalescents individuals have been found who carry the active bacilli anywhere from a few days to 669 days after the disappearance of the membrane in diphtheria. Convalescents from typhoid may carry the organism from a few weeks to twelve to eighteen months after their recovery. Such convalescents may be responsible for some outbreaks of typhoid in schools and colleges. We have no accurate knowledge regarding contacts in typhoid as we have in diphtheria, but it is quite possible for an individual to acquire temporarily the organism and to become a means of transmitting the disease. Several cases of permanent carriers of typhoid fever have been reported as "Typhoid Mary," reported by Dr. Soper of New York City. There are other diseases carried in the same way as has been demonstrated in a case of cerebrospinal meningitis. It would seem advisable in cases of epidemics of various infectious diseases to consider the possibility of human carriers and to give careful instructions to those recovering from these diseases as to how to protect others.

DISCUSSION

Dr. J. C. Bloomfield, Athens: The question of bacillus carriers is a very important one with health officers especially. My experience has been that people are willing to do what is right if they understand the reason. Mild cases of diphtheria, where the patient is not very ill, are the ones that make the trouble, as it is sometimes very difficult to make people understand that such cases are dangerous... In our town there is a milk district with 200 to 250 inhabitants which furnishes one-third of all the cases of typhoid in the city; this district is supplied with the same water as the other parts of the city, and I am convinced that there is a typhoid carrier in that locality. They are careless here about their hygienic surroundings and every year typhoid appears in April and continues until December. In cases of diphtheria, every child in the school-room which was occupied by the patient should have a culture taken. In the city of Athens we have an ordinance that no child who has a sore throat for twenty-four hours can return to school until a culture has been taken and declared free. Many children without membranes give positive cultures.

Dr. J. C. Bennett, Jefferson: If we suppress the carriers of disease, contagious diseases can be stamped out.

Dr. J. R. Branch, Macon: In typhoid it is well known that the patient harbors the bacilli and scatters them through the urine and feces. At the end of convalescence the urine and bile can be sterilized absolutely by the administration of hexamethylenamin, 5 grains three times a day. It would be a good idea to have the urine and feces examined before the patient is discharged.

Dr. R. R. Daly, Atlanta: It is the physicians duty to educate the people in regard to these bacillus-carriers. I know a family of five children who had diphtheria and all were carriers, and yet the father refused to understand that they were dangerous and did not isolate them.

Diseases of the Mouth

Dr. Robin Adair, Atlanta: The neglect of this subject often results in loss of masticating surface, part of a jaw or the death of the patient. Growths in the mouth are often of dental origin, and the custom of treating these cases with drugs is to be condemned. When examining a patient, extend your observations to the gums. The local surgical treatment is the work of a dentist. Fortunes are spent to attempt to cure tuberculous patients, who reinfect themselves every time food, medicine or saliva pass over their diseased cavities and gums. Many so-called throat, eye, stomach, intestinal, liver and kidney troubles are due to a diseased mouth and medical treatment cannot cure them. The mouth must have attention. Many mouths which were in good condition before an illness soon after convalescence develop disease of the gums; this is because the physician has not given proper care to this organ while the patient was under his care. The patient is apt during illness to lose the cleansing advantages and the mouth becomes a culture tube for bacteria.

DISCUSSION

Dr. George N. Niles, Atlanta: In treating cases of gastro-intestinal disease, whether in the adult or the child, one should never neglect the condition of the mouth. The alimentary canal cannot be kept clean unless the mouth is clean.

Dr. R. R. Daly, Atlanta: The antituberculosis society found some time ago that it was not getting the results that it wanted and tried to learn the cause. Dr. Adair was consulted on the subject and he pointed out one reason, the lack of proper care of the mouth. After the society had obtained the services of dentists to work on the teeth of these unfortunates, remarkable results were obtained. Mouth contamination interferes with proper digestion, and it also causes sore throat and other conditions that improve when the teeth are cleansed.

Dr. E. C. Cartledge, Atlanta: At the hospital it is the custom to always clean the teeth of the patient before giving the anesthetic. The germs of pneumonia are always present in the lungs and unless these germs are gotten rid of before the operation pneumonia is likely to occur. This point is too frequently overlooked. I never have a patient consult me unless I first examine his mouth.

Dr. S. A. Visanska, Atlanta: The time to begin oral hygiene is in infancy. It would be a good idea if the society would elaborate on the lines brought out in this paper and especially in regard to the spreading of contagious diseases because of the lack of proper oral hygiene.

A Plea for the Isolation of the Criminal Insane

Dr. W. A. Ellison, Milledgeville: It is my observation that the natural instinct of the criminal is to exercise a malicious influence over his fellow associates, creating disturbances and demoralizing the law and order of things, and if possible inciting insurrection. Worst of all, the criminal hinders the favorable prognosis of the common insane. I plead for a better court of commitment, one that should eliminate the ten days' notice and treat one with a diseased mind rather as a sick man than as a criminal. The shameless exhibition of insanity pushed as a mode of defense in crime and followed soon after commitment by the indignant efforts of the accused to be adjudged sane should make us more cautious, and the erection of colonies for the criminal insane would lessen the number of such pleas on the side of the criminal. In regard to the study of criminology as associated with insanity we may devide it into two classes; insanity as a culminative factor in the production of crime and crime as a culminative factor in the production of insanity. My idea of a colony for the criminal insane is a colony for the insane under the management of a separate board of trustees, or directly under the management of the prison commission, on an area sufficiently large, whereby the able-bodied can be put to work, to develop their bodies and possibly their minds. As physicians we should urge on the state the isolation of this class.

DISCUSSION

Dr. R. R. Daly, Atlanta: There is something peculiar about the criminal insane which differs from what is found in the ordinary case of insanity. The fear of personal harm in these institutions greatly interferes with the work of the doctor, and in Matteawan, N. Y., the doctor always has a personal attendant who does nothing but stand behind. This interferes with the work of the doctor in cases of men who are not criminally insane.

Dr. W. A. Ellison, Milledgeville: Physicians should be given an opportunity to examine the patients suspected of being criminally insane in order to determine the character of their insanity. The proper treatment of these cases should not be interfered with in the courts. While the physician should always be on guard when brought into contact with these patients, he should not be in great fear of personal injury.

A State Journal

The society voted to establish a state journal, owned and controlled by the society and edited by the secretary, Dr. W. C. Lyle, Augusta.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

Archives of Internal Medicine, Chicago

May

1 Oriental Sore in Panama. S. T. Darling, Ancon, C. Z.
2 *Use of Blood Charcoal as Clearing Agent for Urine Containing Glucose. R. T. Woodyatt and H. F. Helmholz, Chicago.
3 *Chlorid and Water Tolerance in Nephritis. K. M. Vogel, New York.
4 *Studies on Water-Drinking. W. M. Hattrem and P. B. Hawk, Urbana.
5 Determination of the Catalytic Activity of the Blood as a Clinical Diagnostic Method. M. C. Winternitz, G. R. Henry and F. McPhedran, Baltimore
6 *Study of the Internal Function of the Pancreas in Carbohydrate Metabolism. J. H. Pratt and L. H. Spooner, Boston.
7 Tuberculous Retroperitoneal Adenitis Connecting by a Sinus with the Duodenum. M. Lincoln, Worcester, Mass.
8 *Case of Synchronous Cardiac and Respiratory Rate. G. W. Norris, Philadelphia.
9 *The Utilization of Fats and Oils Given Subcutaneously. L. H. Mills, New York.

2. Blood Charcoal.—The authors advise that, before any conclusions be drawn from measurements made by the Bang and Bohmannsson method, the individual sample of charcoal which is used shall be thoroughly tested in control experiments.

3. Chlorid and Water Tolerance in Nephritis.—Vogel emphasizes that the manner in which the kidney deals with known amounts of sodium chlorid and water furnishes, at least in some measure, an index of its functional capacity in general and aids in establishing the anatomic diagnosis. It is, therefore, apparent, that whatever may be thought of the salt-poor diet as a routine mode of treatment, the indications to be gained from a study of the chlorid and water intake and output are sufficiently valuable to render it advisable to make such determinations in beginning the treatment in every case of nephritis that is at all severe.

4. **Water Drinking.**—The observations made by Hattrem and Hawk showed that the drinking of copious (1,000 c.c.) or moderate (500 c.c.) volumes of water with meals decreased intestinal putrefaction as measured by the urinary indican output. Copious water-drinking caused a more pronounced lessening of the putrefactive processes than did the moderate water-drinking. In copious water-drinking the total ethereal sulphate output was increased coincidently with the decrease in the indican output. This observation furnishes strong evidence in favor of the view that indican has an origin different from that of the other ethereal sulphates, and that they cannot correctly be considered as indexes of the same metabolic process. When Ellinger's method is employed, the authors say that the determination of indican should be made on fresh urine before any preservative has been introduced. Especially is this true when thymol is used as the preservative. The decreased intestinal putrefaction brought about through the ingestion of moderate or copious quantities of water at meal time is probably due to a diminution of the activity of indol-forming bacteria following the accelerated absorption of the products of protein digestion, and the passage of excessive amounts of strongly acid chyme into the intestine.

6. **Internal Function of Pancreas in Carbohydrate Metabolism.**—The authors found that there is a rapid decrease in the power to assimilate glucose after the onset of atrophy of the pancreas. The persistence of a low limit of assimilation for more than a year shows that the other organs of the body compensated imperfectly, if at all, for the pancreatic insufficiency. Diabetes did not develop in any animal, although in two the atrophy and sclerosis of the pancreas were extreme. It cannot be denied that the retained ability to consume sugar in animals with the pancreas almost totally sclerosed was possibly due to some compensating action elsewhere in the organism. The limit of assimilation in a dog with atrophy of the pancreas which had been under observation fourteen months was increased more than 100 per cent. by feeding fresh pancreas.

8. **Synchronous Cardiac and Respiratory Rate.**—The respirations in Norris' patient were very rapid, but the pulse-rate very slow. The pulse-rate and the respiratory rate were absolutely synchronous, 72 per minute. This condition persisted for about twenty-four hours, during which time the cardiac and respiratory rate remained absolutely synchronous.

9. **Utilization of Fats and Oils Given Subcutaneously.**—Mills' experiments have shown that olive, peanut, cocoanut, sesame, cotton-seed, lard oils, unsalted butter-fat and lard may be given hypodermically and over a considerable period without local irritation, provided aseptic care is used, and no constitutional disturbance occurs, provided precautions are used to prevent injection into the blood-stream. Emulsions of these oils made with 3 to 5 per cent. of egg lecithin and water are permanent, and cause no irritation if given subcutaneously. Oils and fats given subcutaneously are absorbed by means of the lymphatic system and eventually reach the thoracic duct. Lymphatic vessels and glands in contact with and transmitting oil for any length of time become hypertrophied and are thus better able to carry oil. The amount of absorption of plain oil from the subcutaneous tissues after injection during starvation is so small as to be negligible. Emulsified oils and fats injected during starvation are absorbed in amounts sufficient to furnish from one-half to two-thirds of the full calorific requirement of the animals injected. Oils and fats so injected and absorbed have no more influence on the destruction of protein in starvation than has fat given alone by mouth. Plain oils injected subcutaneously under conditions of low protein ingestion are little, if any, better absorbed than when similarly given during starvation. Emulsified oils injected under these conditions are absorbed quite as well as similar oils given to starving animals. Plain and emulsified oils are absorbed about equally well when the animals injected are given a plentiful supply of protein in their food. This probably furnishes the large quantity of lipolytic enzymes necessary for body action on plain oil. The injection of oils subjected to lipolysis causes death, which is due apparently to the production of oleic or other acids with the possible formation of toxic quantities of soaps. Oil absorbed from the tissues after subcutaneous injection is (a) burned in the body for the production of heat and energy, thus sparing the body fat; (b) retained as such within the organism; or (c) possibly converted into body fat by reconstruction in the liver, from which it may be sent for storage to the various fat depositories, after which it is drawn on as needed. Proof of this last proposition is lacking. It seems likely, from comparative examination of the iodin indices of the ether extracts of visceral and adipose tissue that the actively functioning viscera use oil and fat absorbed after subcutaneous injection for the direct performance of their functions, and that the storage of the foreign fat given in excess of the nutritive requirement takes place principally in the subcutaneous tissue, liver and lungs, to a small extent in the kidneys and spleen, while the pancreas and stomach and intestines are practically uninfluenced. This demonstration that after injection under suitable conditions oils can be absorbed to an amount capable of covering so large a proportion of the calorific requirement suggests the application of such injections to the treatment of wasting diseases, to the cachectic conditions associated with imperfect metabolic processes, and especially to tuberculosis, in which the intolerance to fats is almost symptomatic.

Buffalo Medical Journal

May

10 Pellagra in Buffalo. G. W. Wende, Buffalo.
11 A Plea for Hospital Delivery of Our Maternity Patients. L. Schroeter, Buffalo.
12 Fiftieth Anniversary of the Graduation of Drs. Clawson and Smith. C. G. Stockton, Buffalo.

New York State Journal of Medicine

May

13 *Medical Teaching and State Boards of Medical Examiners. C. Stover, New York.
14 Venesection and Saline Infusion in Pneumonia. J. S. Waterman, Brooklyn, N. Y.
15 *An Improved Method for the Extraction of the Immature Cataractous Lens. H. E. Smith, Norwich, N. Y.
16 Early Functional Danger Signals in Abdominal Disease. R. S. Fowler, Brooklyn, N. Y.

13. Abstracted in THE JOURNAL, May 6, 1911, p. 1351.

15. **Extraction of the Cataractous Lens.**—The operation described by Smith differs in two particulars from the usual extraction operation. Taking a firm and deep grasp with the fixation forceps on the conjunctiva just below the insertion of the internal rectus muscle, a knife with a blade the shape of a miniature scalpel is thrust through the cornea about the middle of the supero-temporal quadrant and the blade carried down to the lower edge of the dilated pupil, its edge being toward the operator. The handle is then made to describe the arc of a circle away from the surgeon, and a cut is made through the capsule up to the upper limit of the pupil, the blade, then slightly withdrawn, is carried over to the inner side of the mid-pupillary space, the same maneuver repeated and a cut made in the capsule at right angles to the first. The blade is then turned into the same plane as its entrance and is withdrawn. If for the left eye the operator stands on the left side of the patient, the fixation is just above the internal rectus and the knife entered into the infero-temporal quadrant, the cut in the capsule then begins at the upper limit of the pupil. The procedure otherwise is the same. After the capsulotomy the conjunctival sac is flushed with an antiseptic lotion, the patient given a hypodermic of ¼ grain morphin and put to bed. He is allowed to remain there from four to six hours before the extraction proper is performed. This does not differ from the ordinary method, but the corneal section should be ample, for most immature cataractous lenses are large. The period of waiting and the method of capsulotomy are the two essentials of this operation. During the waiting period the capsule, having been amply divided, curls away

from the cortex and allows the aqueous to insinuate itself between this and what remains of the enveloping capsule, causing a separation between the two. That this is true is seen by the ease with which the later delivery of the lens is always accomplished, and its clean, full and smooth outlines when it does come out.

Medical Herald, St. Joseph

May

17 *Present Status of Salvarsan. A. Schalek, Omaha, Neb.
18 *Suggestions for the Application of Lactic Ferments in Genito-Urinary Work. F. S. Mason, New York.
19 *Difficulties Encountered in Late Operations for Intestinal Obstruction. H. E. Pearse, Kansas City, Mo.

17, 18 and 19. *Abstracted in* THE JOURNAL, *April* 15, 1911, pp. 1140 and 1141.

Journal of Biologic Chemistry, Baltimore

May

20 Refractive Indices of Solutions of Certain Proteids. *Gliadin.* T. B. Robertson and J. E. Greaves, San Francisco.
21 Method for Quantitative Determination of Aliphatic Amino Groups. D. D. Van Slyke, New York.
22 Quantitative Determination of Prolin Obtained by the Ester Method in Protein Hydrolysis. Prolin Content of Casein. D. D. Van Slyke, New York.
23 Digestion of Protein in the Stomach and Intestine of the Dogfish. D. D. Van Slyke and G. F. White, New York.
24 Relation Between the Digestibility and the Retention of Ingested Proteins. D. D. Van Slyke and G. F. White, New York.
25 *Increase in Metabolism Due to the Work of Typewriting. T. M. Carpenter, Boston.
26 Pentosans in Lower Fungi. A. W. Dox and R. E. Neidig, Ames, Iowa.
27 Factors Influencing the Quantitative Determination of Gliadin. *J. E. Greaves, San Francisco.*
28 Composition of Certain Substances Produced by the Action of Pepsin on the Products of the Complete Peptic Hydrolysis of Casein. T. B. Robertson and H. C. Biddle, San Francisco.
29 Theory of the Mode of Action of Inorganic Salts on Proteins in Solution. T. B. Robertson, San Francisco.
30 Relationship Between Urea and Ammonium Salts. A. J. Wakeman and H. D. Dakin, New York.
31 Formic Acid as an Intermediary Substance in the Catabolism of Fatty Acids and Other Substances. H. D. Dakin and A. J. Wakeman, New York.
32 Sulphur in Proteins. T. B. Johnson and G. Burnham, New Haven, Conn.
33 Hydrolysis of Casein. T. B. Osborne and H. H. Guest, Connecticut.

25. **Increase in Metabolism Due to Typewriting.**—*Carpenter* found that the rate of from fifty-seven to 115 words per minute resulted in an increase in the pulse-rate from 90 to 120, and in the respiration per minute from 19 to 30. There was also an increase in the body temperature, although it is evident that the total rise was not satisfactorily measured in these experiments. The work of typewriting at the rates reported in his experiments resulted in an increase of 30 to 70 per cent. in the total metabolism above the resting metabolism, or an average of about 50 per cent. The amount of increased energy above the resting-metabolism per 1,000 words was on the average about 7 calories, and the increase in both the carbon dioxid and the oxygen was 2.5 grams. The increase in carbon dioxid and oxygen due to 1,000 strokes on a typewriter was 0.57 and 0.54 grams, respectively, and about 1.6 calories increase in energy output. The measure of metabolism by periods during the work of typewriting shows that there was a gradual decrease in the amount of energy required per 1,000 strokes. This was more marked in the individuals whose hands and fingers became extremely tired, which would indicate that during fatigue, work is accomplished more economically. The average equivalent amount of work calculated from the increase in metabolism in these experiments varied from 1,950 to 4,600 *kilogrammeters per hour,* and the calculation based on these results gave an average of 145 kilogrammeters per 1,000 strokes of typewriting. The variation in the increase in metabolism due to the work of typewriting in these different individuals is considered to be due to differences in individual facility and technic. The female subjects represented the extremes in these experiments.

Lancet-Clinic, Cincinnati

May 20

34 *Preparation Required for the Practice of General Surgery. G. W. Green, Chicago.
35 Insanity and Allied Conditions. I. O. Allen, Richmond, Ind.
36 Myositis Ossificans. S. Lange, Cincinnati.
37 Cincinnati's Tuberculosis Problem and Some Suggestions for Its Solution. W. H. Streitmann, Cincinnati.

34. *Abstracted in* THE JOURNAL, *Sept.* 24, 1910, *p.* 1134.

American Journal of Orthopedic Surgery, Philadelphia

May

38 *Treatment of Congenital Talipes Equinovarus in Infancy and Early Childhood. R. E. Soule, New York.
39 *Artificial Impaction in Hip Fractures. F. J. Cotton, Boston.
40 A Scheme for Determining the Correct Relative Position of the Joint of an Apparatus to the Anatomic Joint. J. J. Nutt, New York.
41 A Case of Tubercular Osteomyelitis of the Extremity of the Femur Resembling Infantile Scurvy. S. M. Cone, Baltimore.
42 *Muscular Weakness and Pain. E. H. Bradford, Boston.
43 A Case of Congenital Elevation of the Scapula. P. Le Breton, Buffalo.
44 The Plaster Swathe. R. Soutter, Boston.
45 A Rolling Bench for Use After the Reduction of Congenital Luxation of the Hips. G. G. Davis, Philadelphia.
46 Anatomic Anomaly Causing Symptoms of Broken Arch. F. J. Cotton and H. F. Day, Boston.
47 An Instrument for Shortening Tendons. A. O'Reilly, St. Louis.

38. ***Congenital Talipes Equinovarus in Infancy.***—Soule emphasizes particularly that the earlier begun and the more continuous the treatment, the less likelihood of having to resort to braces at a later period. He says that the inward rotation of the tibia on its long axis is usually found in cases which have been allowed to continue into early childhood before attempting correction of the club-foot. Knock-knees is also a later development found in the walking period. It is emphasized that no case should be left to the nurse or parent to manipulate, neither should they remove or apply fixing dressings and manipulate the foot. With the continuous plaster dressings correction is more quickly attained, and the restoring of balance between the adductor and abductor muscles and the reforming of articular facets is more certain, and the maintenance of the position is absolutely under control. The treatment is kept under the control of the surgeon better with plaster-of-Paris dressings than with readily removable dressings. There is less atrophy from plaster than from the restricting bands of braces. With reasonable care cleanliness is maintained, and there should be no irritation of the skin if the plaster is not carried above the knee. Excoriations will not interrupt treatment when zinc oxid adhesive plaster is used to protect the foot. A child walks much more comfortably and easily in a well-applied plaster dressing than in any confining brace. Adhesive plaster applications can be used when the surgeon desires to test the ability of the foot to maintain itself without allowing any loss in the amount of correction attained. Restoring the foot to an apparently corrected position does not constitute a final result. Soule holds that tenotomies are seldom necessary. When the tendo achilles is tenotomized a most important resisting point toward the correction of the deformity is removed. The division of the plantar and internal ligaments removes an important element in the correction of the abnormal contour. Open division of structures produces scar tissue which furnishes an added element toward relapse.

39. **Artificial Impaction in Hip Fracture.**—Cotton regards it rather strange in view of the admittedly poor prognosis of unimpacted hip fractures that no one seems to have reached the obvious inference as to treatment. He asks: if unimpacted hip fractures fail of union and do badly while similar impacted fractures do relatively well, then why not impact? Yet such impaction seems not to have been attempted in any deliberate fashion. Cotton tried it in one case. An unimpacted was converted into an impacted fracture. Perfect position was not obtained, nor was the erosion of bone ends entirely averted; but from the time of operation there was no crepitus, no mobility, no tendency to loose eversion, and the result is comparable with the usual result of impacted fracture of the femoral neck in a patient of this age and type. A similar result was obtained in a second case.

42. Abstracted in THE JOURNAL, July 2, 1910, p. 51.

Woman's Medical Journal, Cincinnati

May

48 Clinical Observations in Feeding Dispensary Babies. E. L. Coolidge, New York.
49 Factors for and Against Gynecologic Operations. M. D. Rushmore, New York.
50 *Alcohol in Relation to Epilepsy.* S. Radcliffe, Yonkers, N. Y.

Bulletin of the Lying-In Hospital of the City of New York

June

51 *Cesarean Section by the Small Median Incision Above the Umbilicus. A. B. Davis, New York.
52 *Summer Diarrhea in Infants Under Two Years. E. L. Coolidge, New York.
53 Radical Treatment of Abortion. G. W. Kosmak, New York.

September

54 Fibromyomata of the Uterus, Complicating Pregnancy, Labor and the Puerperium. R. W. Lobenstine, New York.
55 Prolapse of the Umbilical Cord. C. B. Knapp, New York.
56 *A Case of "Puerperal Bacteremia" Treated by Intravenous Injections of Magnesium Sulphate. R. W. Lobenstine, New York.
57 Pregnancy Complicated by Nephritic Abscess; Normal Delivery Followed by Nephrectomy. J. W. Markoe, New York.
58 A Case of Exstrophy of the Heart. J. E. Welch, New York.

December

59 An Outline of the History of the Society of the Lying-In Hospital of the City of New York. J. W. Markoe, New York.
60 The Beginnings of Mind in the New-Born. F. Peterson and L. H. Rainey, New York.
61 *What We Can Expect from Vaccines in Puerperal Sepsis. J. O. Polak, Brooklyn, N. Y.
62 *A Modification of Lane's Operation for Cleft Palate and Harelip. J. W. Markoe, New York.

51. **Cesarean Section.**—Davis makes a very extensive detailed report on 197 Cesarean sections performed in the service of 60.000 cases, or once in 304.56 cases (0.33 per cent.).

52. **Summer Diarrhea in Infants.**—The routine treatment pursued in this service of the Lying-In Hospital has been as follows: For bottle-fed babies under 1 year of age, as soon as the infant is seen, all milk is stopped and the baby given either barley or granum-water. These gruels are made by mixing 1 heaping teaspoonful of the flour with 1 pint of water, cooking the same for fifteen minutes, then adding a pinch of salt. This thin gruel is fed every two or three hours, according to the age of the child, the proper number of ounces for the special age being prescribed. Two ounces of boiled water are also given between meals. This feeding is kept up for twenty-four or forty-eight hours according to the severity of the attack. At the end of this time the mother is instructed to add 1 ounce of whole milk to each pint of the gruel and from this point the milk is gradually worked up in the formulæ until the correct amount for the child's age and digestive capacity is reached. The baby is not kept on gruel alone for any great length of time, and to this fact more than to anything else Coolidge attributes success in dealing with these cases. There are some babies that cannot digest the fat in cow's milk after a severe attack of diarrhea and in such instances condensed milk is substituted for the fresh milk, as the former contains such a very low percentage of fat that it is usually well borne by this class of babies. As the infant improves, fresh milk is gradually substituted for the condensed milk until the correct formula can be taken. Coolidge generally begins the condensed milk in a dilute mixture, often 1 part of the condensed milk to 30 of the gruel and gradually increases the strength until the dilution is 1 to 10 or 12 according to the age of the child. At this point one feeding of a weak fresh milk formula is substituted for one of the condensed milk, then in a day or two, two meals of the fresh milk, etc., until all fresh milk is being taken. Babies from 1 to 2 years of age are given, in addition to the above food, mutton or chicken broths free from fat, once or twice a day, also a little zwieback broken up in the broth. After two or three days, farina porridge made as thick as an ordinary breakfast cereal is given, often with a very small bit of butter added to make it palatable, until milk can be used on the same. In breast-fed babies, the mother is instructed to give barley-water for twenty-four hours and to apply the breast-pump at regular intervals during this time. Boiled water is also given to these breast-fed babies. At the end of this time 1 or 2 ounces of barley-water is given to the child just before the breast and then the nursing is allowed for five minutes at each feeding time. As the stools improve the amount of barley-water is decreased and the nursing from the breast increased until gradually the child is taking its usual amount of nourishment. The medication given these cases depends on the severity of the infection; when the stools are simply frequent, thin and yellow or green, give from 1 to 2 teaspoonfuls of castor oil and follow this up the next day by aromatic syrup of rhubarb, in doses of from 5 to 20 drops every three hours, according to the child's age. This is generally continued for two or three days. Very often this is all that is required. If at the end of this time the stools are still frequent, containing blood or much mucus, calomel, $^{1}/_{10}$ of a grain, every hour for ten doses is prescribed, and after several free movements follow it up by a bismuth mixture.

56. **Magnesium Sulphate in Puerperal Bacteremia.**—The uterine culture in this case showed a pure growth of streptococci at the end of twenty-four hours. The blood-culture presented no apparent growth after twenty-four hours, but a very abundant growth at the end of forty-eight hours. On the second day after admission, 30 grains of magnesium sulphate were dissolved in 8 ounces of sterile water and the mixture introduced into one median basilic vein at a temperature of 108 F. There was a slight chill after the infusion and the temperature went up temporarily from 103 to 104.2 F. The pulse continued about 120 to the minute, and on the second day following this first injection, both the pulse and temperature showed some slight improvement. The patient's general condition also appeared a trifle better. On the third day after the injection the temperature dropped to nearly the normal, while the pulse came down to between 90 and 100. That night, however, there was a sudden change for the worse; the temperature went up to 105 F., and the pulse 130-140. Strong stimulation was required and death was looked for within twenty-four hours, as the patient became weak and listless. A second injection of magnesium sulphate of the same strength was now given. This was again followed by a chill and a temperature rise to 106.4 F. Within six hours both the temperature and the pulse began to subside, so that two days later both were normal. A blood-culture taken at this time remained sterile after three day's incubation. Convalescence was rapid and uneventful thereafter.

61. **Vaccines in Puerperal Sepsis.**—Polak admits that vaccine therapy has a definite field in the treatment of puerperal septic infection in the subacute stage and after the local focus has formed, it hastens convalescence. Inoculations with autogenous vaccines will promise prompt results in staphylococcic and colon bacillic infections, but in streptococcic poisoning, vaccine treatment is unreliable, and is of value only when the virulence of the germ is attenuated, or when Nature has already developed a phagocytic defense.

62. **Modification of Lane's Operation for Cleft Palate.**—The technic of Lane is followed by Markoe, except that the mucoperiosteum covering the intermaxillary bone is separated from the subjacent bone and carefully fitted under a raised flap from the opposite alveolus, this completely closing in the arch of the alveolus and also helping to form the floor of the nose anteriorly.

Journal of the Delaware State Medical Society, Wilmington

May

63 What Is Heart-Block? A. Robin, Wilmington.

Kentucky Medical Journal, Bowling Green

May 15

64 Rheumatic Eye Disease. S. G. Dabney, Louisville.
65 Ectopic Gestation. H. A. Davidson, Louisville.

Journal of Pharmacology and Experimental Therapeutics, Baltimore

May

66 *An Experimental Study of Camphoric Acid. G. B. Roth, Ann Arbor.
67 Influence of Various Salts on Tetany Following Parathyroidectomy. C. Voegtlin and W. G. MacCallum, New York.
68 *Rôle of the Portal Circulation of the Liver in Bile Formation and Jaundice. C. Voegtlin and B. M. Bernheim, Baltimore.
69 *Laxative Properties of the Tribasic Salts of Phenolphthalic Acid. L. G. Rowntree, Baltimore.

66. **Action of Camphoric Acid.**—Roth found that both on frogs and higher animals sodium camphorate acts as a stimulant to the central nervous system, producing in the frog, at times, a distinct increase in reflexes. It is devoid of effect

on the secretory nerve endings of the sweat glands and in addition has no influence on the salivary secretions. The drug given as the sodium salt is comparatively non-toxic for frogs, cats or rabbits. It is more toxic when given intravenously than subcutaneously. Its diuretic effects are comparable to those of an indifferent salt such as sodium chlorid. It raises the blood-pressure in mammals and has some depressing effect on the heart muscle. These circulatory changes like the effects on the kidney are due to salt action. Camphoric acid given to animals as sodium camphorate is a true respiratory stimulant.

68. **Bile Formation and Jaundice.**—The authors hold that the amount of bile formed by the liver *depends on the blood-flow* through this organ. The jaundice and fatal toxemia resulting from occlusion of the common bile duct can be avoided by an Eck fistula made at the time of the ligation of the duct. In cases in which, owing to occlusion of the duct, jaundice has already developed, an Eck fistula causes the symptoms to disappear. It is shown by the authors that the liver has a hemolytic function.

69. **Laxative Properties of Tribasic Salts.**—Experiments were made by Rowntree to see if potassium phenolphthalate and sodium phenolphthalate possess purgative properties. The neutral solution was injected into dogs which were kept in separate metabolism cages and whose diet and water had been carefully controlled and the condition of whose stools was known. Only such dogs whose stools were well formed, were hard, dry and friable, were used. The skin was shaved in spots and the drug injected under aseptic conditions and with antiseptic precautions. At first it appeared that no local irritant effect accompanied the subcutaneous administration of these preparations, but in about half of the experiments evidence of local irritant effects did appear, sometimes only as a slight indurated nodule appearing within a week or two after the injection, again as an infiltration involving a considerable area and appearing within two or three days. Rowntree says that undoubtedly these preparations are irritant locally. These substances are of little or no value as subcutaneous purgatives and do not compare at all favorably with phenolphthalein itself or its tetrachlor derivative.

Journal of Ophthalmology and Oto-Laryngology, Chicago

May

70 Ocular Manifestations of Arteriosclerosis and Their Diagnostic and Prognostic Significance. C. A. Veasey, Spokane, Wash.
71 Neuralgia of the Larynx. H. Kahn, Chicago.

Vermont Medical Monthly, Burlington

May

72 Indigestion as a Surgical Symptom. I. S. Haynes, New York.
73 Bacteriologic and Serodiagnosis of Syphilis. C. F. Dalton, Burlington.

Dominion Medical Monthly, Toronto

June

74 *Case of *Entero-Uterine* Anus. F. W. Marlow, Toronto.
75 A Case of Infection of an Indefinite Nature in Which Sodium Salicylate Appeared to Have a Beneficial Action. G. Chambers, Toronto.
76 Insanity. R. H. Robinson, Toronto.

74. **Entero-Uterine Anus.**—Following an abortion in Marlow's case there developed an entero-uterine anus. Presumably the uterus was punctured during the induction of abortion or during later manipulations, and then the intestine was either dragged in through the opening or it herniated through. At any rate a few days later the fecal matter discharged from the uterus into the vagina, in its entirety, there being none whatever passed per rectum. Meanwhile the patient presented signs of pelvic peritonitis and was very ill. Later the peritonitis subsided, but she gradually became emaciated. The discharge was of fluid consistence and so irritating that excoriation existed all over the perineum and half way down the inner sides of the thighs. The conclusion arrived at by Marlow was that the opening was between the small intestine probably low down, as the emaciation was not extreme considering the time elapsed and the lower segment of the uterine body. Marlow did an entero-anastomosis and closed the opening in the uterus. The patient made a complete recovery.

Louisville Monthly Journal of Medicine and Surgery

May

77 Cancer of the Breast. L. Frank, Louisville, Ky.
78 Transfusion of Blood. D. W. Barrow, Lexington, Ky.
79 Acute Anterior Poliomyelitis. E. B. Bradley and F. H. Clarke, Lexington, Ky.
80 The Wassermann Reaction. R. H. Davis, Louisville, Ky.

Boston Medical and Surgical Journal

May 25

81 Occurrence of Infantile Paralysis in Massachusetts in 1910. R. W. Lovett and P. A. E. Sheppard, Boston.
82 *Anterior Poliomyelitis. M. J. Rosenau, P. A. E. Sheppard and H. L. Amoss, Boston.
83 *An Experimental Study of Tendon Regeneration. J. W. Sever, Boston.
84 *Tendon Suture. F. L. Richardson, Boston.

82. **Anterior Poliomyelitis.**—The fact that the virus of epidemic poliomyelitis was not demonstrated in the buccal and nasal and pharyngeal secretions of eighteen experimental cases studied by the authors is not considered by them to be proof that it may not have been there. They hold that in any event, the virus would have been greatly diluted, owing to the relatively large amount of salt solution used to wash the mucous membrane. Furthermore, under the conditions of the experiment, the virus may have been so attenuated as to be incapable of infecting monkeys. It is well known that a considerable quantity of the virus from the central nervous system of man is sometimes required to initiate the infection in monkeys. The authors do not construe their results as in any way disproving the assumption that the infection in this disease may be discharged from the mucosa of the upper respiratory passage and enter through the same channel.

83. **Tendon Regeneration.**—Thirteen operations were performed by Sever on as many cats for the purpose of studying this question. He found that: Silk or linen thread is an excellent material to use to lengthen tendons in suitable cases. The growth of new tissue will penetrate and permeate the silk only slightly, and in some cases not at all, and does not absorb it. When the peritendineum and tendon sheath have been removed, some foreign body such as silk is essential for regeneration, to serve as a director for the new growth. With the sheath and the peritendineum present and sutured, no foreign body need be inserted. In this case the new growth is true tendon tissue. Without the presence of the sheath and the peritendineum, no true tendon tissue can be regenerated. Such tissue is merely fibrous tissue, lacking elasticity and subject to stretching. The new "tendons" are apt to be larger and stronger than the resected ones, especially when silk has been used to replace the resected portion. Provided the sheath and peritendineum are preserved and function allowed early, adhesions may not occur. Without the sheath, adhesions may and do occur much more frequently.

84. **Tendon Suture.**—Richardson favors the following procedure: The first stitch is introduced in the shorter end of the tendon about a qurater of an inch from the cut end. (1) The suture is passed through the tendon transversely and (2) then back parallel to the first stitch at about the same distance from the cut end, but a little to one side of the first stitch. A half knot is tied, not too tight. (3) The same suture is then passed through the other end of the cut tendon, and while the assistant holds the cut ends together, the suture is (4) passed back parallel to the third stitch, a half knot is tied and the two free ends of the suture are securely tied together. The pull of this suture is obliquely across the fibers of the tendon. If the tendon is a large one, or if there is much strain in approximating the ends, a second and possibly a third similar suture may be introduced from other sides of the tendon. As this suture tends to displace the ends of the tendon laterally, it may be necessary to put one through-and-through suture near the cut ends to hold them in close approximation. Wherever possible, the tendon sheath should be reconstructed about the tendon to prevent the ingrowth of scar tissue from surrounding connective tissue. The important things to be borne in mind in tendon suture, stated in the order of their importance, are: (1) Asepsis, (2) preservation of peritendineum, (3) approximation of ends; (4) restoration of tendon sheath, and (5) dryness of wound.

Chicago Medical Recorder

May

85 Prognosis and Treatment of Burns. L. E. Schmidt, Chicago.
86 Caricature in Medicine. M. Frank, Chicago.
87 Treatment of Syphilis. A Retrospect and a Prospect. E. A. Fischkin, Chicago.
88 The Minor Cardiants. W. F. Waugh, Chicago.

Journal of the Minnesota State Medical Association and the Northwestern Lancet, Minneapolis

May 15

89 *Pulmonary and Circulatory Complications Following Surgical Operations. E. H. Beckman, Rochester.
90 *Autogenous Vaccines in the Treatment of Mixed Infectious in Pulmonary Tuberculosis. R. T. Pettit, Ottawa, Ill.
91 *Sudden Death in Cardiovascular Disease. G. Cross, Minneapolis.
92 *Bovine Tuberculosis in Relation to Human Ills. A. Kuhlman, Melrose.
93 A Lead Shot in the Appendix. A. N. Collins, Austin.
94 A Case of Typhoid Perforation Successfully Operated On. A. C. Strachauer, Minneapolis.

89. Abstracted in The Journal, Nov. 26, 1910, page 1922.

90. An article on the same subject was published in the *Illinois Medical Journal*, April, 1911.

91. Abstracted in The Journal, Nov. 26, 1910, page 1922.

92. **Bovine Tuberculosis and Human Ills.**—In a farmer family, a girl, 16 years of age, complained of a sore throat, catarrh of the nose, foul breath and indigestion. On examination she had enlarged tonsils, swollen cervical glands, and a general congestion of the mucous membrane of the nose and throat. Lungs, negative; no tubercular history in the family. Shortly afterward her father complained of similar symptoms—catarrh, slight cough and indigestion. Three other children had enlarged tonsils, enlarged cervical glands and digestive disturbances. One boy had frequently severe pains in the stomach and abdomen, most marked over the cecum and always worse at night. The family was treated at intervals for about six months. Besides the local treatment of the nose and throat, medicine was given to relieve the indigestion, and general tonics were administered. Six months afterward the farmer applied to Kuhlman for treatment, and said that he had killed a cow which had been discharging from the nostrils, coughed and had slowly wasted away. A competent veterinary surgeon made a tuberclin test of all his cattle, thirty-eight in number. All, with the exception of six, gave the tuberculin test for tuberculosis. He sent all the cattle affected to the State Sanitary Board and they were slaughtered in South St. Paul. The farmer bought a new stock, but had every new cow tested. This was a year ago and since that time they have been practically free from ills. The catarrh is all gone and the boy has not had any more attacks of what Kuhlman once diagnosed as a slight attack of appendicitis. It is Kuhlman's opinion that there is more tuberculosis among cows than is generally believed by the average physician, and that it would be worth while in many cases to investigate the source of the milk as bearing some relation to disease.

Southern California Practitioner, Los Angeles

May

95 Puerperal Infections—Cause and Treatment. T. J. Watkins, Chicago.
96 Treatment of Disease by Spinal Concussion, Sinusoidal and Freezing, etc. H. E. Stroud, Los Angeles.
97 Physiology and Pathology of Senescence. H. E. MacDonald, Los Angeles.
98 The Dawn of Medicine, the Pre-Hippocratic Period. C. L. Allen, Los Angeles.

Archives of Pediatrics, New York

May

99 *Chronic Intestinal Indigestion in Early Life. J. P. C. Griffith, Philadelphia.
100 *Blood-Pressure in Cases of Acute Nephritis of Children. L. Gordon.
101 Certain Fractures of the Upper Extremity in Children. I. S. Haynes, New York.
102 Post-Typhoid Delirium. A. Baines, Toronto.
103 *Studies on Milk Sugar. H. F. Helmholz, Chicago.
104 Taxis and Succussion. A New Treatment of Intussusception. J. Zahorsky, St. Louis.

99. **Chronic Intestinal Indigestion.**—Griffith emphasizes that medical treatment of chronic intestinal indigestion in early life is largely of secondary consideration. The overcoming of the constipation, which is such a common symptom, is important. In addition to the hygienic measures, either small daily doses of a saline laxative or of cascara, phenolphthalein or similar drug may be required. In other cases a small amount of sulphate of magnesia or syrup of rhubarb may be added to the tonic medicines administered. In bad cases the nightly injection of olive oil or cotton-seed oil may be of service. Very often the diet may be selected to overcome the constipation, bearing in mind, however, that many of the laxative foods are more or less irritating to the bowels. As a rule, enemata are not efficient, as they operate only on the rectum. A drug is required which affects the whole intestinal tract. Where there is much secretion of mucus from the bowel, saline douching is sometimes of service, but this practice should not be continuous, as it sometimes maintains the symptoms which it is intended to cure. The administration of a good malt extract appears to aid the digestion of starch. One should be selected which is known to contain a large percentage of diastase, as there is a great difference among them in this respect. In general, as far as other medicinal treatment goes, Griffith has had the best results with the combination of an alkali with a bitter tonic. For this purpose, bicarbonate of soda may be given with tincture of nux vomica, compound tincture of gentian, and an aromatic water, administered ten to twenty minutes before meals. Cod-liver oil, although theoretically an excellent remedy to improve the general health, is often contraindicated, especially early in the disease, on account of its tendency to increase indigestion in many cases. The remark applies to the use of iron given for the anemia, since until convalescence is established this may increase the digestive trouble and the constipation. The importance of resistance in the treatment is emphasized. Griffith says that unless this is maintained, and especially unless the dietetic treatment is rigorously followed for months, an improvement which has seemed very decided, and even a cure which has seemed complete, will inevitably be followed by relapse.

100. **Blood-Pressure in Acute Nephritis in Children.**—According to Gordon, the blood-pressure in children suffering from acute nephritis is raised and this rise of pressure may be very great. In three of seven acute cases, the hypertension was very marked. This fact is of diagnostic value, as in no other disease of childhood is there to be found the same high range of blood-pressure. Those patients who had the highest pressure were those in whom only a slight trace of edema was noticeable, and also it is of interest to note that in these same patients the quantity of blood in the urine was very great, the urine indeed looking like the pure blood; the explanation of the large quantity of blood in the urine being probably, that a rupture of the renal capillaries had occurred consequent on the greatly increased blood-pressure. Gordon emphasizes the fact that in children it is only by means of the sphygmomanometer that changes in the blood-pressure can be ascertained with any degree of certainty.

103. **Milk Sugar.**—Helmholz tries to show that the commonest type of gastro-intestinal trouble is caused directly by the food; that it is brought on in its most acute form by the lowering or the overstepping of the tolerance for sugar, be that by improper feeding, by infection, by spoiled milk, by high external temperature, or by other causes. The food which under normal conditions, nourishes the child, becomes a poison as fatal as bacterial toxins. He emphasizes that the purity of the milk, though of great importance, is not the only important factor. The emphasis that is being laid on pasteurization of a city's milk supply, while it is of great value and, if properly understood, leads to much good, has, unfortunately, overshot the mark among the uneducated. Instead of feeding their infants fresh milk they avoid the bacteria entirely by giving them proprietary foods, with the dire results that one sees in dispensary work. This concentration on the bacteria of milk has left the equally important factor of the quantity and character of the food entirely out of account. How many mothers, he asks, are there in America to-day who realize the danger that lurks in the sugar which they so generously add to the milk? How many doctors are there who appreciate this fact? How many doctors are there who will tell a mother to stop nursing her child with no other indication than the fact that the first few

drops of milk expressed from the breast are blue? We see this in the dispensary only too often. This cornerstone of infant feeding is lightly set aside, not by one, but by a large percentage of physicians, who will take a child from the breast for the most trivial reasons. As regards his advice to mothers on feeding infants, it will depend largely on who sent him the last sample of proprietary food. What we need, he says, is education of the doctor primarily, and, by him, the education of the public. We need to cull the scientific and clinical facts from the mass of empiricism of infant feeding, so that they can be presented to the physicians in a form that will be useful to them, so that they may appreciate the dangers as well as the therapeutic advantages of the different elements of the milk. What we need is capable supervision of each milk station by men who can make each station a center from which the propaganda of rational feeding and therapy will spread, so that ignorance will keep no infant from the breast, so that ignorance will no longer prevent the institution of the right therapy when there is still hope to save the child.

New York Medical Journal

May 27

105 *An Operation for Progressive Spinal Deformities. R. A. Hibbs, New York.
106 Papillary Carcinoma of the Bladder with Metastasis of the Tarsus and Metatarsus. G. E. Shoemaker, Philadelphia.
107 Education in Social and Sexual Hygiene. C. E. Nammack, New York.
108 Why Are We Opposing Forms in Medical Nomenclature? T. W. Schaefer, Kansas City, Mo.
109 *Medicozoologic Nomenclature; the Correct Name of the Protozoon of Syphilis. C. A. Pfender, Washington, D .C.
110 Lactic Ferments in Genito-Urinary Works. F. S. Mason, New York.
111 Methyl Alcohol Amblyopia. T. B. Holloway, Philadelphia.
112 The Roentgen-Ray a Duty in Cancer. S. Tousey, New York.
113 A Plea for the Early Diagnosis and Early Surgical Treatment of Mammary Cancer with Special Reference to Obtaining Better Results. J. H. Gleason, Manchester, N. H.

105. **Progressive Spinal Deformities.**—Hibbs has done an operation for stiffening the knee joint (1), which consists of removing the patella from its periosteum and putting it in the joint after a space is freshened in the bones to receive it, the periosteum then being stitched to that of the tibia and femur. In these cases the patella was not absorbed, but formed a bridge between the tibia and femur, and the periosteum reproduced in every case new bone sufficient to make a large bony bridge and a perfectly safe bony ankylosis. This operation led to the conception, that if the periosteum of the spinous processes was carefully removed, and the processes were divided at their base and placed longitudinally in the interspinous space touching with either end of the base from which the processes were removed and then the periosteum brought back and sutured, a similar condition would be produced. That is, the process would become adherent to the base at either end, thus filling up the interspinous gap with solid bone, and the periosteum would reproduce more bone so that there would be secured a fusion of the posterior aspect of the vertebra by a bridge of bone which would increase in size and strength so that absolute ankylosis would be secured. Hibbs has done this operation on three patients, all with Pott's disease of the spine. A sufficient time has elapsed only in one case to give positive proof that the condition which he attempted has been produced.

109. **Medicozoologic Nomenclature.**—It is shown by Pfender that the correct generic name of the protozoon which produces syphilis is *Treponema*, with *Treponema pallidum* as type species, and not *Spirochaeta*, which has become popularized.

Medical Record, New York

May 27

114 The Medical Side of the Army Maneuvers in Texas. N. S. Jarvis, New York.
115 Dreams and Their Analysis in Reference to Psychotherapy. H. W. Frink, New York.
116 Functional Sexual Disorders Proceeding from the Genito-Urinary Tract. T. M. Townsend and J. J. Valentine, New York.
117 The Value of Doing Nothing. R. P. Francis, Montclair, N. J.
118 Herpes Zoster, Acute Poliomyelitis and Zinc Phosphide. W. F. Waugh, Chicago.
119 Treatment of Neurasthenia. F. H. Barnes, Stamford, Conn.
120 Pneumonia. C. S. Webb, Bowling Green, Va.
121 A Case of Transposition of the Heart. N. P. Brooks, Conquista, Coah, Mexico.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London

May 13

1 *Functional Derangements of the Nervous System. G. E. Rennie.
2 Lead Poisoning and the Race. Sir T. Oliver.
3 Granular Kidney and Its Surprises. S. West.
4 *A Fatal Case of Secondary Syphilitic Nephritis. A. J. Hall and J. M. Beattie.
5 The Vasomotor System in Tabes. H. Matthews.
6 *Two Cases of Congenital Aphasia in Children. E. McCall.
7 *Treatment of Rheumatic Diseases by Vaccines. C. P. Ball.
8 *Deep Temperature of the Human Body at Rest and After Muscular Exertion. N. D. Bardswell and J. E. Chapman.
9 Prescription of Glasses. R. A. Morrell.
10 *Etiology of Iritis. R. A. Yeld.

1. **Functional Derangements of Nervous System.**—The point is emphasized by Rennie that the indications for treatment from a review of the pathology of neurasthenia are somewhat different from those in hysteria. While the mental symptoms are still prominent, it is not necessary to adopt the isolation treatment. A mistake is very often made, he says, in advising neurasthenic patients to start off on a sea voyage before any attempt has been made to improve their physical condition, although it is true that a change of scene and surroundings, combined with relief from work, is very beneficial in diverting the patient's thoughts from himself and restoring him to a healthier frame of mind. A neurasthenic is not only jaded in body and mind, and unable to stand the strain of traveling or to take an interest in sightseeing, but he is also suffering from digestive derangements and sleeplessness, and these latter conditions are often aggravated by traveling. Rennie has seen this so often that he is satisfied that we do best for our patients if we first of all put them to bed in the fresh air with quiet and rest, relieve their digestive disturbance by appropriate dieting, secure the free action of the bowels, favor elimination by the skin by warm baths and massage. The state of nutrition of the nervous system can also be improved by securing oral asepsis, by the use of intestinal antiseptics, and by the use of tonics, especially the glycero-phosphates and the hypophosphites. After a month or so of this treatment, the patient will be much improved physically, and will then be able to profit very considerably by a voyage or by a stay in some health resort. Rennie warns to be most guarded in prescribing sedative drugs—for example, opium, morphin or heroin—without very careful consideration, owing to the great tendency there is for patients to contract drug habits. In fact, he says, the less we depend on drugs, the more we adopt general hygienic treatment, the greater the amount of good we shall do for patients suffering from the various forms of functional derangement of the nervous system.

4. **Secondary Syphilitic Nephritis.**—In the case reported by Hall and Beattie, vomiting was almost constant, and a troublesome feature of the case. Nothing seemed to give any relief. They thought at first it was due to the milk diet, and eventually solid food was tried, but it made little or no difference. Headache was chiefly frontal and almost constant. Dropsy remained considerable at all times, and increased toward the latter part of life. The pitting over the abdomen and thorax was always great. The specific gravity of the urine varied from 1.010 to 1.019. The quantity was always considerably below normal, but the man sweated very profusely, not only in the hot-air baths, but often at other times also. The blood-pressure usually was about 160 (max. systolic). The temperature was normal throughout, and the fundi oculorum were normal. Early in June a papulo-erythematous rash appeared in the axillæ, elbow hollows and groins, the sites of mercurial inunction. This spread over the trunk and limbs, was very irritable, and peeled freely. A month later he became much worse, the dropsy increased, and the tongue and lips became more sore. The hands became tremulous, later the ears were sore and painful, conjunctivitis and inflammation of the nail-beds followed. On August 6 he became noisy and delirious, with insomnia, and he died comatose on Aug. 9, 1910. At the necropsy, the kidneys were

found enlarged, the capsules stripped easily, leaving a smooth surface, color pale, stellate veins marked. The superficial cortex was increased, being in the proportion to medulla of 1 to 1. Section showed a uniform yellowish color, vascular markings obliterated; no amyloid change, no pelvic dilatation; no cysts; tissue firm and edematous; vessels slightly thickened at places.

6. **Congenital Aphasia in Children.**—These two cases illustrating the forms of mental defect known as word-blindness and word-deafness, were met with by McCall during the course of medical inspection of the elementary school children. As they seemed to be fairly typical examples of these conditions McCall believes they are worth recording. Male, aged 12 years, was presented on account of his inability to learn to read. Except for this defect, he was of quite average intelligence. Most painstaking efforts had been made to teach him to read; for many years he had extra tuition at school for this purpose, but with practically no result. Hearing and vision were normal. He answered questions readily, recognized by name all objects presented to him, but failed to spell the noun denoting a given object. He recognized single letters, but was unable to interpret the written word. He wrote well from a copy, and had a good eye for form; he drew well from still life. One of his drawings represented an onion in section; below was written "Onion, cut across." When shown the word "onion" he named it correctly, doubtless from association of ideas; the two following words "cut across" he was unable to recognize. He could not write a single word from dictation, but could write his own name correctly, this being obviously mechanical, due to frequent repetition.

The second patient was a male, aged 8 years, Oriental by birth. Muscular control was poor; the child jerked and twisted his arms and head continually. When spoken to he took no notice, and might easily be taken for a deaf child. A noise at once attracted his attention. He responded by head movements to sounds made by the other children in the class. He attempted to reproduce the spoken word by lip reading, and succeeded to some extent. His brother, a very intelligent lad, communicated with him largely by signs. When shown an object and told its name he would repeat the word, watching the speaker's lips, but did not retain the memory of the word, even when again shown the object. His speech was markedly defective and the intonation resembled that peculiar to cleft palate (this might be due to the very high palatal arch). As words, however, meant nothing to such a child, he did not attempt to imitate them unless directly made to do so; he therefore did not learn to talk.

7. **Vaccine Treatment of Rheumatic Diseases.**—While resident medical officer to the Royal Hospital for the Incurables, Dublin, some years ago, where there are always a very large number of chronic rheumatic cases, Ball was struck with the peculiar sapremic appearance of most of these patients, and in some of them it was possible to trace in the history the onset of the disease following on some distinct infection, or subsequent to a chronic suppuration. From experience with a large number of cases, he believes that the focus of infection can at times be ascertained, and although a few are probably due to a specific microorganism, many cases are due to a general sapremia following from a localized seat of infection. Many cases have come under his notice where the focus of infection has been found microscopically to contain chiefly streptococci. In some cases even, where no seat of infection—such as bad teeth, leukorrhea, intestinal putrefaction and colitis—could be found, he has used the antistreptococcic serum with success. So many of these cases responded with such remarkable results that he thinks their use is justified in all doubtful cases. Even in a case of acute articular rheumatism following on an attack of gonorrhea with subsequent gleet, he has had success by the employment of antistreptococcic vaccines, when the injection of gonorrheal vaccines had failed.

8. **Body Temperature in Rest and After Exertion.**—It has frequently been stated that a rise of temperature following exercise is a characteristic sign of pulmonary tuberculosis, and, in fact, that the disease can be recognized by such a rise. Bardswell and Chapman are convinced by the results of their experiments that this obviously is not the case. Again, a rise of temperature occurring in a consumptive patient after exercise is by many considered to be evidence that the patient has inoculated himself. What is termed auto-inoculation may have taken place, but the fact of the temperature being raised, even to a considerable extent, is in itself no evidence of such auto-inoculation. The authors point out that it is a fact of some interest in this respect that the consumptive in good general condition, but with well-marked physical signs and with bacilli still in the sputum, will often be found to have a lower temperature after a given amount of exercise than a healthy person who has done exactly the same work. The rise of temperature in the consumptive in such a case is not due to an auto-inoculation; it is a physiologic rise as a result of the exercise. Finally, since it is the practice to regulate the exercise of consumptives in no small measure by noting the effects of given amounts of exercise on the temperature, it is clearly of great assistance to have a knowledge of the effect of such exercise on the temperature of the normal person.

10. **Etiology of Iritis.**—Of 159 cases of primary iritis referred to by Yeld, 45.28 per cent. were syphilitic; 16.35 per cent. were rheumatic; 15.09 per cent. were *gonorrheal;* 10.06 per cent. were toxemic; 1.25 per cent. were gouty; 1.25 per cent. were osteo-arthritic; and 10.6 per cent. were obscure in origin.

Lancet, London

May 13

11 *Heredity and Insanity. F. W. Mott.
12 Abnormal Forms of Breathing in Cases of Angina with Pulsus Alternans. J. D. Windle.
13 *Six Cases of "Utriculoplasty" for Uterine Hemorrhage. V. Bonney.
14 *Nature of Hematocolpos Fluid, and the Character of the Obstructing Membrane. W. B. Bell.
15 Hidden Dangers of Appendicitis: A Plea for Early Operation. H. J. Patterson.
16 *Unusual Effects of Perforated Gastric Ulcer. W. P. S. Branson and T. P. Legg.
17 Progress in Cancer Research. C. E. Walker.
18 Two Cases of Eosinuria. A. C. D. Firth.
19 *A Rare Case of Congenital Umbilical Hernia. J. P. Mitchell.
20 The National Insurance Scheme: The Prussian Official Tariff for Medical Attendance. G. P. Forrester.

11. **Heredity and Insanity.**—Mott summarizes his paper as follows:

1. Hereditary predisposition is the most important factor in the production of insanity, imbecility *and epilepsy. It is the tendency* to nervous and mental disease, generally speaking, which is inherited. This may be termed the neuropathic taint.

2. Education, sanitation and the rest, as Bateson has stated, are only the giving or withholding of opportunity *for good or ill.*

3. Alcohol is a powerful coefficient, but not of itself the main cause in the production of insanity, except in the rather infrequent cases of alcoholic dementia.

4. Certain types of insanity may be transmitted with greater frequency than others. This has been termed similar heredity. The types are: Periodic insanity (also termed "manic-depressive"), delusional insanity and epilepsy. The general rule, however, is for a different type to appear.

5. Mothers transmit insanity and epilepsy with much greater frequency than do fathers, and the transmission is especially to the daughters.

6. Anticipation or antedating is the rule whereby the offspring suffers at a much earlier age than the parent: more than one-half of the insane offspring of insane parents are congenital idiots or imbeciles, or have their first attack in *the period* of adolescence. This adolescent insanity may take an incurable form of dementia in a large number of cases; in others it is usually mania, melancholia, or periodic insanity, and not infrequently epilepsy with or without imbecility. Very rarely does the parent become insane before the offspring. *This is a strong argument* of hereditary transmission, possibly hereditary transmission of an acquired character.

7. *Regression to the* normal average may be (1) by marriage into sound stocks, or (2) by anticipation or antedating leading to congenital or adolescent mental disease terminating the perpetuation of the unsound elements of the stock.

8. High-grade imbeciles who are not at present in any way checked in procreating owing to social conditions interfering with survival of the fittest, together with chronic drunkards, neurasthenics and neuropaths, are contiually reinforcing and providing fresh tainted stocks.

9. Recurrent insanity, owing to the fact that patients are not segregated for any length of time, is probably the most potent cause of insane inheritance. Facts tend to support the opinion that the recurrent types of insanity during lucid intervals may breed a stock of potential lunatics and paupers.

10. Nature is always striving to go back to the normal average and only relatively few of a stock are insane. A stock with a streak of insanity when combined with *genius* is not bad, and the same may be applied to a nation; but we only want a streak of genius and insanity, the great body of the nation should be of good normal average, for Mott believes that nation will possess

the greatest potential virility in the struggle for existence that can breed from the greatest number of men and women with good bodily health, who possess a large measure of the three attributes of civic worth—viz., courage, honesty and common sense, combined with parentage, pride of family and pride of race.

13. **Utriculoplasty.**—Utriculoplasty is considered by Bonney a legitimate alternative to hysterectomy in the treatment of intractable uterine hemorrhage due to the condition variously known as "hemorrhagic metritis," "chronic fibrotic metritis," and other similar terms, and also that it is feasible to apply it to a uterus the seat of small multiple myomata. It would appear to be preferable to hysterectomy when the patient is still of child-bearing age, and the cervix is reasonably healthy, and especially if the patient herself objects to an enforced abolition of the menses. In the reverse of these conditions, removal of the uterus is the more suitable operation—by total hysterectomy if the cervix be unhealthy, by subtotal hysterectomy in all other cases. In the event of pregnancy following utriculoplasty it would, Bonney thinks, be desirable to induce the labor some weeks in advance in order to lighten the work of the uterus.

14. **Nature of Hematocolpos Fluid.**—According to Bell hematometra rarely occurs with hematocolpos, and can only be a very late complication. The non-coagulability of menstrual blood is due to the removal of fibrin ferment and fibrinogen, probably effected by the endometrium. The lactic acid present is not produced by bacteria. The calcium content of menstrual discharge is very high. The vagina is for the most part developed from the Müllerian ducts, and its lining epithelium may therefore occasionally be of a columnar type, and glands may be present.

16. **Perforated Gastric Ulcer.**—Severe pain over the left loin and lower ribs was the main symptom complained of by the authors' patient. This followed a supposed attack of pleurisy which was later shown to have been perforation of a gastric ulcer. Although gastric symptoms of note were conspicuously absent, the trouble had been gastric in origin, a cytologic examination of the contents of the fasting stomach was carried out, and demonstrated the presence of pus in considerable quantity. In spite of this positive evidence it was hard for anyone who saw the gusto with which the patient attacked an ordinary meal to believe that a serious lesion was present in the stomach. Blood examination showed a moderate grade of secondary anemia without leukocytosis. It was noted as a curious and recurrent feature of the illness that with each acute paroxysm of pain, the left arm and hand, with the left side of the chest, became covered with sweat, the right side remaining perfectly dry. At the operation, a tender epigastric swelling was found to be explained by a large area of dense fibrous adhesion by which the anterior wall of the stomach and the anterior belly wall were bound inseparably together, the cicatrix penetrating the belly wall to a considerable depth. The stomach was somewhat contracted, and exhibited a certain degree of hour-glass deformity at the site of its adhesion to the anterior parietes, while the posterior wall, in practically its whole extent, was immovably fixed to the tissues behind it. The greater omentum contained numerous enlarged and hard lymphatic glands. A certain amount of the dense fibrous material uniting the two was cut away, but it was finally decided that complete separation was impossible because so large a part of the anterior wall of the stomach was attached to the parietes. The belly was closed without the effecting of anything remedial. Contrary to expectation, the operation was a complete success. Five months later, the patient expressed himself as entirely free from pain, and had gained in weight.

The authors conclude that the pains which were the predominating feature of the malady in its later stages were neuralgic in character. It is supposed that they were excited by the involvement of branches of the intercostal nerves in the cicatrix which bound the stomach to the anterior belly wall, and that in the effort to effect a separation here the damaged nerve-endings were divided from their stems. They believe that the more or less fortuitous cure suggests that the part played by the intercostal nerves in producing the chronic pains of gastric ulcer is worthy of more attention than it has received. It is not unlikely that the unexplained relief of abdominal pain occasionally derived from an inconclusive exploratory operation may be due to section of peripheral nerves in the course of the incision, and conversely, that the failure to obtain relief from gastro-enterostomy may at times depend on the fact that the pain is not gastric in origin but neuralgic—that is to say, intercostal.

19. **Congenital Umbilical Hernia.**—Mitchell's patient was a child, 6 hours old. On examination the thoracic organs were found to be normal. The abdomen was the usual size, soft and palpable, but was everywhere resonant, no liver dulness being definable. Projecting very much into the attenuated umbilical cord was a body, which in size and shape resembled a cocoanut; it was of a deep bluish-red color, the surface was smooth and even, the consistence firm and resilient. There was no gurgling on pressure, and it was not reducible. At its attachment the base was 3 inches in diameter, circular, and surrounded by an area of very pink, hard and thick, but healthy skin. The umbilical vessels were situated on the under surface of the hernia. An incision was made on the superior surface of the hernia and a director was inserted between the parietal peritoneum and the contents of the sac. Adhesions which had formed were easily overcome, and when the sac was separated off, the whole of the left lobe and the greater portion of the right lobe of the liver were found prolapsed into the cord. It was not easy to replace it in the abdomen, for the round ligament was found to be holding it in its position; it was therefore ligatured and cut and the liver fell back into position. Three deep transverse silkworm-gut sutures were passed through the recti muscles, which were firmly approximated, the sutures being buried. The umbilical vessels being ligatured the thickened firm edges of the navel were trimmed and several superficial sutures inserted, thus obliterating the circular aperture and making a vertical wound. Healing took place by granulation and a perfect cicatrix was obtained. There is thus far no evidence of weakness in the abdominal wall.

Journal of Tropical Medicine and Hygiene, London

May 1

21 Infection by Schistosomum Japonicum. A. H. Skinner.
22 Schistosomum Japonicum Dysentery in an American Child. O. T. Logan.
23 Drugs and Drug Habits in Burmah. R. H. Castor.

Lyon Chirurgical, Lyons

May, V, No. 5, pp. 421-544

24 Fatal Complications of Cancer of the Prostate. (Comment meurent les cancéreux prostatiques.) V. Rochet and C. Ronot.
25 Access to the Pelvis by the Coccyx-Perineal Route. P. Fiolle and D. Zwirn.
26 *Precordial Thoracectomy or Cardiolysis. (L'opération de Brauer dans un cas de médiastino-péricardite tuberculeuse.) J. Curtillet and G. Pélissier.
27 Advantages of Fowler Position in Treatment of Acute Peritonitis. L. Arnaud.
28 Gangrene of Intestine from Obliteration of Mesenteric Vessels. F. Leclerc and G. Cotte.

26. **Cardiolysis.**—Curtillet and Pélissier report the first application in France of Brauer's method of precordial thoracectomy for adherent pericardium although three other operations of the kind have been done in France since. The operation has been done twenty times in Germany and three times in England, they state. In the personal case reported the patient was a tuberculous young man, and although the operation warded off the dangers on the part of the heart, yet the tuberculous polyserositis continued its implacable course. The edema disappeared by the sixth day after the operation and the patient who had previously been confined to bed was able to be up and about, his heart then responding to digitalis, previously almost entirely ineffectual. In fifteen of the total twenty-seven cases the heart trouble was of tuberculous origin, and the results in this group were by no means the poorest reported.

Obstétrique, Paris

April, IV, N. S., No. 4, pp. 345-480

29 *Tuberculin Reaction During Pregnancy and Parturition. (De la sensibilité des femmes enceintes et recemment accouchées à la tuberculine.) P. Bar and L. Devraigne.
30 Technic for Pubiotomy. R. de Bovis.
31 *Glycogen in the Placenta. (Le glycogène dans le placenta discoide.) S. Zaretzky.

29. **Sensibility to Tuberculin of Pregnant and Parturient Women.**—Bar and Devraigne have applied the intradermal tuberculin test to 28 non-pregnant women, 137 in different stages of pregnancy, 198 recently delivered, and again a second time in 42 parturients. They also injected a drop of a 1 to 10,000 solution of tuberculin in 130 new-born infants. The findings all harmonize with the assumption of antibodies as responsible for the reaction to the tuberculin, especially the constantly negative results in new-born infants, the frequent negative results in tuberculous women with rapidly progressing lesions and the intensity of the reaction in tuberculous women who are holding their own against the disease. The findings are classified and tabulated under various headings. They differ in certain particulars from those reported by Stern in similar research.

31. **Glycogen in the Placenta.**—Zaretzky discusses the important glycogenic function of the fetal membranes and placenta and its share in the carbohydrate nourishment of the fetus. His monograph fills over sixty pages and is accompanied by ten full-page colored plates and an extensive bibliography.

Presse Médicale, Paris

April 29, XIX, No. 34, pp. 341-352

32 Technic for Total Resection of Superficial Idiopathic Varices of the Leg. P. Alglave.
33 The Radioscopic Changes in the Stomach, Duodenum and Large Intestine, Standing and Lying. T. Tuffier and Aubourg.

May 3, No. 35, pp. 353-360

34 *Localized Pulmonary Edema or Tuberculosis? R. Brunon.

34. **Nephritic Pulmonary Edema or Tuberculosis?**—Brunon has sometimes encountered cases in which edema in the apex of the lung, resulting from kidney disease, simulated a tuberculous process, passing through the phases of hemoptysis, induration and cachexia with cavity formation, and yet the tubercle bacilli were not involved. Differentiation is particularly important as nephritis and tuberculosis require opposite treatment, the extranourishing food indicated for the latter doing harm in the former. He describes a case of this kind in a youth of 15 with an acute febrile affection and physical signs, including radiography, suggesting induration of the right apex and involvement of some glands in the chest, discovered after the stormy onset of an acute febrile condition lasting twenty days, with slight albuminuria. The fever subsided with copious diuresis and the signs in the apex gradually disappeared, but the slight albuminuria persisted for eight months and the glandular process for a year. Cases of this kind confirm the possibility of a local congestion at the apex which may or may not be accompanied by a bronchial adenopathy. The diagnosis must be based on study of the antecedents, the evolution of the disturbances, analysis of the urine, which always contains more or less albumin in these cases, and on the benefit from restriction to a milk or milk-vegetable diet. This dieting is not only the best treatment but it serves to clear up the diagnosis.

Semaine Médicale, Paris

May 3, XXXI, No. 18, pp. 205-216

35 The Internal Secretion of the Stomach. M. Loeper.

Berliner klinische Wochenschrift

May 1, XLVIII, No. 18, 785-828

36 *By-Effects of Salv[illegible] nerscheinungen bei mit Salvarsan [illegible] Finger.
37 Diffuse Elephanti[illegible] zur Salvarsanbe[illegible] [illegible]nn.
38 [illegible] in Scalp. (Zur Kenntnis des syph[illegible] an der behaarten Kopfhaut.) L. Weiss.
39 *The Cerebrospinal Fluid in Tuberculous Meningitis. J. Hohn.
40 *Colon Bacilli in Cerebrospinal Fluid. (Bacterium coli im Liquor Cerebrospinalis.) W. Hartwich.
41 Operative Cure in Case of Epigastric Hernia. J. Gottschlich.
42 Senile Atrophy of Skull in Dogs. L. Pick.
43 The Urine After Salicylic Medication. (Ueber den Harn nach Salicylsäuregebrauch.) C. Neuberg.
44 *Contrast Color Test in Study of the Blood, etc. (Die Kolorimetrie mittels der Kontrastfarbe, speziell in ihrer Anwendung auf die Hämometrie.) E. Schlesinger and E. Fuld.
45 *Treatment of Incontinence and Pyelitis. M. Klotz.
46 *Prophylaxis of the Plague. (Pest und Pestbekämpfung.) A. Worster.

May 8, No. 19, pp. 828-876

47 *The Psychic Condition Immediately After an Accident. (Der psychische Zustand frisch Verletzter.) E. Meyer.
48 *Tuberculous Peritonitis in Children: Forty-Five Cases. J. Cassel.
49 Policlinic Experiences with Albumin Milk in Infant Feeding. (Erfahrungen über Ernährung mit Eiweissmilch.) L. Rollet.
50 Intermittent Dyskinesia of Arm as Symptom of Sclerosis of Arch of the Aorta. A. Bretschneider.
51 Technic for Intravenous Injection of Salvarsan. S. L. Bogrow and H. Mayer.

36. **Injurious Action of Salvarsan on Nervous System.**—Finger here gives the detailed histories of three cases of optic neuritis after salvarsan, which have already been mentioned in these columns. He states that there have been quite a number of cases with peculiar and occasionally severe nervous manifestations with which the neurologists are not familiar, among the 250 patients who have been given intravenous injections of salvarsan at his clinic. He is convinced that in some of these cases the trouble was not a neurorecurrence but the result of toxic action from arsenic, similar to the phenomena frequently observed at once after the injection, such as headache, vertigo, tinnitus, dryness in the throat, prostration, palpitations, vomiting and diarrhea which all have their analogies in acute arsenic intoxication. The inefficacy of antisyphilitic measures applied against them confirms this assumption. In other cases they seem to be manifestations of the syphilis, assuming unusual forms under the influence of the salvarsan. Rusch has suggested that salvarsan may sensitize the virus, but the spontaneous retrogression of the manifestations in many cases testifies against their being of a syphilitic nature. In conclusion, Finger remarks that while convinced that salvarsan has an undoubted neurotropic action, yet he does not think that this is often displayed and the injury to the nerve seldom impairs its function completely, and the disturbance has a tendency to spontaneous retrogression, although in his first two cases permanent damage resulted. He regards it as his task at present to learn more about the new remedy before he combines it with the old and tried ones.

39. **Cerebrospinal Fluid in Tuberculous Meningitis.**—Hohn reports the findings in four cases out of a much larger number in his experience in which the puzzling diagnosis was cleared up by the findings in the cerebrospinal fluid which he regards as characteristic for tuberculous meningitis. These findings are very little sediment and very high albumin content in the cerebrospinal fluid, with lymphocytosis either pure or accompanied with a few polynuclear leukocytes. The latter are always in degenerative forms. In the case described, one or two tubercle bacilli were also found in the fluid soon after the disease had been differentiated by the above findings.

40. **Colon Bacilli in the Cerebrospinal Fluid.**—Hartwich reports the case of a man of 42 who had suffered from melancholia for over a year and was much debilitated, but the organs seemed to be intact until symptoms suggesting acute miliary tuberculosis developed, to which the patient succumbed. Necropsy revealed tuberculous ulceration in the small intestines which possibly explained the finding of colon bacilli in the cerebrospinal fluid twice during the last week of life.

44. **Contrast Hemoglobin Color Test.**—Schlesinger and Fuld have applied a new principle to determine hemoglobin percentages. It is based on the fact that when fluid of one color is inspected through a screen of another color the thickness of the screen determines whether the color of the screen or the color of the fluid behind it is perceived by the eye. The receptacle containing the blood, diluted to 5 per cent., is inspected through a screen which is a long, hollow tapering wedge, containing green gelatin. This hollow wedge is moved along over the vessel containing the blood, which is readily seen through the thin layer of green in the tapering end of the wedge-vessel, but as the thickness of the layer of green increases, toward the broad end of the wedge, there comes a point where the blood can no longer be seen, the eye perceiving merely the green interposed. In the apparatus constructed for the purpose the screen is covered, except for two slits, and as the screen is moved along it reaches a point where through one slit the red blood is still visible, while through the other slit, 5 mm. beyond, only green can be perceived. The point between the slits is accepted as the index of hemoglobin proportion. This same principle can be applied as a test for the proportion of indican, acetone, acetic

acid, etc., but it is important to select a color for the contrast which is transparent for rays of the same wave-length but which appear to the eye as another color. This method of determining the hemoglobin percentage is proving accurate and free from the influence of the personal equation.

45. **Treatment of Enuresis.**—Klotz has noticed that children inclined to enuresis sleep unusually heavily, and even when awakened in the night the bladder is liable to empty iself spontaneously before the child is fully aroused. In institutions the person on duty in the night can systematically wake the child and thus forestall the enuresis, but in the family the better plan is to prevent such heavy sleep by having the child take a nap morning and afternoon, for two hours. This is particularly important for lively, active children, and it is this class who are so exhausted at night that their sleep is abnormally heavy. By this means, with a little training, the children soon learn to awake and attend to Nature spontaneously. He has another method for less nervous children which has been found very effectual—inducing a psychic shock which seems to cure the tendency to enuresis. The child sits naked on a stool, the seat of which is cut out and has an arrangement below by which a strong jet of cold water can be turned against the anal and genital region. A single application of this method generally sufficed. If it has to be repeated he alternates the cold with warm water. He has found this douche a valuable aid in institutional cure of enuresis. In treatment of anal incontinence he trains the child to systematic defecation by the regular use of glycerin suppositories, twice a day, soon substituting cocoa butter suppositories and omitting both at the earliest moment when defecation proceeds without them, after rhythmic functioning of the bowels has been secured. In inflammation of the bladder and kidney pelvis, with acid urine, he has long been using potassium citrate with excellent results. He gives to infants from 0.5 to 1 gm. (7.5 to 15 grains) two or three times a day, increasing the dosage if the urine has not become alkaline by the second or third day. Larger children require larger doses to bring an alkaline reaction at once. The cure is generally complete in three or four weeks. This vegetable alkali, he says, is non-toxic and more effectual than sodium bicarbonate.

46. **The Plague.**—Worster refers to the experiences at Java in effectual warding off of cholera last year, and urges the adoption of similar measures in China. These are the establishment of a central bacteriologic station, where natives are trained in disinfection and vaccination and are then sent out to do the work among their compatriots, others taking their places in the training stations. The native assistants can do far more effectual work among the people than foreigners.

47. **The Psychic Condition After Accidents.**—Meyer has been devoting special attention to investigation of the psychic conditions immediately after severe accidents. In twenty-five of the thirty-seven patients examined, abnormal psychic conditions were evident and in five they were quite severe, prolonged or permanent. The psychic disturbances had no special features, but resembled closely those observed in infectious diseases, etc., including a slight tendency to delirium by the first or second day after the injury. It was a surprise to find on close examination so much disturbance, of which the patient himself was not aware, and which would have escaped superficial examination.

48. **Tuberculous Peritonitis in Children.**—Cassel reviews his experiences with fifty-two cases; in seven the tuberculous origin of the ascites was not certain but in the others there was no doubt of this. Eight of the children were under 2 years old, thirty between 2 and 6, and six between 7 and 11. Of the thirty-one without operative treatment eight of the children are cured, nine have died and the fate of the others is unknown. Only six of the fourteen given operative treatment are in good health to date, six others dying in a few weeks after the operation. The better the environment the greater the chances for recovery after the operation for tuberculous peritonitis, and he advocates an operation when the condition is still febrile after several weeks of medical measures. At the same time, when change of climate is possible and conditions are favorable, he clings to expectant treatment a little longer.

Centralblatt für die Grenzgebiete der Med. und Chir., Jena

April 28, XIV, No. 6, p. 209-240

52 *Deep-Lying Goiter. (Struma intrathoracica.) S. Kreuzfuchs. Commenced in No. 3.

52. **Intrathoracic Goiter.**—Kreuzfuchs reviews 116 articles bearing on this subject, grouping the findings and discussing the history, the relations between intrathoracic goiter and neighboring organs, its prevalence, the symptoms it induces, especially those on the part of the lungs, heart or mediastinum in general, and the differential diagnosis. The prognosis of the affection has much improved with the possibility of early diagnosis and perfected operative technic, but still the inaccessibility of the intrathoracic goiter renders its removal frequently difficult, pneumonia or mediastinitis having followed in Simon and Bouilly's two cases. Kocher has not lost any of his twenty-two patients of this class. The prognosis is graver if the operation on the goiter has been preceded by tracheotomy. Kolaczek has reported a cure after removal of a goiter protruding into the thorax and showing signs of malignant degeneration. The radical operation is preferable to all other measures of treatment, but an attack of suffocation might be combated by an appropriate position of the head and application of ice to the neck if the goiter has suddenly increased in size, giving morphin or codein, in case of spasm of the glottis, or a general anesthetic if the goiter has become incarcerated as occurred in Wölfler's case. Internal or external iodin treatment has given good results in some cases but Kocher warns that this is liable to be of service only for parenchymatous goiters, acute swelling of the thyroid in pregnant women or new-born infants while it is useless with old fibrous goiters and is directly dangerous with exophthalmic goiter.

Correspondenz-Blatt für Schweizer Aerzte, Basel

May 1, XLI, No. 13, pp. 449-496

53 *The Exudative Diathesis and Mountain Climate. A. v. Planta.
54 Increasing Prevalence of Urinary Calculi in Switzerland. E. Lardy.
55 Wassermann Reaction in Diagnosis of Syphilis. E. Sonntag. Commenced in No. 12.

53. **The Exudative Diathesis and Mountain Climate.**—Planta practices at St. Moritz in Switzerland and he states that the climate there has a remarkable action on the exudative diathesis and especially on one of its principal manifestations, bronchial asthma. The general health improves, the blood-picture shows marked benefit and the nervous system gains tone. It is a familiar fact, he says, that the constitutional diseases are much rarer among the inhabitants of mountain districts than elsewhere, and when they occur they are of a milder type. His sixteen child patients with bronchial asthma, brought up into the mountains as the last resort after failure of all other measures, had no further attacks. Only two of them had a mild recurrence in the first two weeks after an intercurrent severe "cold." But on return to the lowland the asthma returned, and it did not yield so readily during a second sojourn in the mountains. His experience confirms the necessity for making the most of the first stay, lengthening it out to a year if possible. The task is to transform the exudative diathesis, and this cannot be accomplished in two or three weeks. It requires a year at least. Arrangements should be made for the schooling of children, and for this and other reasons a children's sanatorium in the mountains offers the best chances for the children's outgrowing the tendency. Eight of his sixteen asthma children had obstinate eczema and four of these frequently had fleeting urticaria. All were extremely nervous children; three had convulsions and spasms—all this confirms the assumption of the underlying diathesis.

Deutsche medizinische Wochenschrift, Berlin

May 4, XXXVII, No. 18, pp. 817-864

56 Treatment of Wandering Kidney. (Wanderniere.) P. Fürbringer.
57 *Weil's Disease. A. Hecker and R. W. Otto.
58 *Percussion of One Apex when the Other is Muffled. (Neue Methode zur Perkussion der Lungenspitzen.) J. Plesch.

59 Serodiagnosis of Syphilis. (Syphilisdiagnostik und das Syphilisdiagnosticum nach v. [illegible]
60 The High Frequency Electr [illegible] quenzströme in der Medizin.) W. Telemann.
61 *Psychogenic Vulvar Pruritus. M. Walthard.
62 *Operative Treatment of Cerebral Apoplexy. (Hirnschlag.) H. Iselin.
63 Disturbances in the Circulation After Muscular Effort in Incipient Tuberculosis and Their Diagnostic Importance. (Frühtuberkulöser Kreislaufstörungen unter dem Einfluss von Muskelarbeit.) V. Hufnagel.
64 *Acute Syphilitic Nephritis and Salvarsan. (Akute luetische Nephritis im Zusammenhang mit einem durch Salvarsan geheilten Fall.) H. Nador.
65 Nitrite Poisoning from Fertilizer. (Ueber die Chilisalpetervergiftung und den spektroskopischen Nachweis des Nitrits im Blute.) K. Wind.

57. **Weil's Disease.**—Hecker and Otto describe the acute infectious disease characterized by jaundice, muscular pain, fever and enlargement of the liver and spleen, as they have observed it in army circles. Their data include 200 cases and show that the disease occurs almost exclusively during the heated term and that it is not contagious. Very mild and atypical forms of the disease are observed especially at the beginning and end of epidemics. The typical complete syndrome was encountered only at the height of the epidemic, and only in those who during the period of incubation were subjected to unusual physical stress, such as swimming.

58. **Percussion of the Sternum for Apex Findings.**—Plesch states that as the apices lie close to the first ribs, percussion is especially instructive when it is applied to the manubrium, with one hand laid over one apex of the lung, thus muffling the resonance here. This enables the resonance from the other lung to be perceived with unusual clearness.

61. **Psychic Pruritus.**—Walthard refers especially to vulvar pruritus and gives the particulars of two severe cases typical of the psychogenic pruritus. As soon as examination has shown that the parts are anatomically normal, notwithstanding the intense pruritus or neuralgia, he refrains from all local measures and merely by moral suasion convinces the patient of the harmlessness and baselessness of the pruritus. When he has brought the patient to the "Well, what of it?" point of view, the battle is won, and the patients are cured not only of their pruritus, but their whole mode of thought is transformed. This psychotherapy is efficient in all forms of psychogenic algias, hypersecretion of the genital glands and functional disturbances of the musculature of the genital organs.

62. **Operative Treatment of Apoplexy.**—Iselin comments on Franke's suggestion for operative treatment of apoplexy (mentioned in The Journal, Sept. 3, 1910, page 895), and states that he recently performed an operation of the kind, but on a mistaken assumption. The patient was a man of 62 who had fallen on a stone step and a subdural hematoma had developed. Iselin trephined three hours later. The immediate result was good, but after the brain had begun to pulsate again and consciousness had returned there was renewed hemorrhage, and necropsy showed that the trouble had been an apoplectic hemorrhage into the internal capsule. He reviews the literature on the subject, urging further discussion of Franke's suggestion.

64. **Salvarsan in Syphilitic Nephritis.**—Nador reports a case of acute syphilitic nephritis in a woman of 26 in which differentiation was long difficult. By the third week the entire body was swollen, vision reduced and there was much headache, with nausea and dyspnea. The Wassermann reaction cleared up the diagnosis, and after a single dose of salvarsan all the symptoms subsided within a month, without leaving a trace. The case teaches the importance of suspecting syphilis in every acute nephritis not otherwise explained. Except for a week of violent intestinal catarrh, there were no by-effects that could be attributed to the salvarsan; it was injected into the gluteal muscle in the dose of 0.5 gm.

Medizinische Klinik, Berlin

May 7, VII, No. 19, pp. 721-760

66 Phagocytosis and Virulence. T. J. Bürgers.
67 Successful Removal of Intradural Spinal Tubercle. (Intraduraler Konglomerattuberkel des Rückenmarks; Operation; erhebliche Besserung.) M. Bönniger and S. Adler. Commenced in No. 18.
68 Metabolism in Myxedema. A. Gigon.
69 Favorable Influence of Injection of Blood from Patient with Polycythemia in Case of Pernicious Anemia. E. Walter.
70 Relations Between Myoma and Diabetes Mellitus. E. Neisser and H. Koenigsfeld.
71 Advantages of Combined Mercury-Salvarsan Treatment of Syphilis. M. Loewenberg.
72 *Salicylates in Prevention and Treatment of Chronic Disease, and Especially of Nephritis. (Bemerkungen über Krankheiten und Krankheitsbehandlung und Besonderes über Nierenentzündung.) F. Weitlaner.
73 Importance of Dietetic Treatment in Disease of Upper Air Passages. M. Senator.
74 Relations Between Artificial and Natural Means of Cure at Health Resorts. (Verhältnis der künstlichen Kurmittel zu den natürlichen des Kurortes.) J. G. Siebelt.
75 Lipoid Droplets in Urine Sediment. F. Falk and L. v. Siebenrock.

72. **Salicylates and Long Life.**—Weitlaner comments on the importance and frequency of infection in affections hitherto considered as purely functional, and in the flaring up of old chronic processes. He thinks that death in the elderly is almost invariably due to some acute infection, generally with the pneumococcus. Without infection he thinks that men might live to be 150 years old. He even suggests that the old saying should be modified to "A man is as old as he is sensitive to pneumococcus infection." To attain a ripe old age infection must be avoided, and as this is practically impossible, the next best is to fight infection. He declares that after reaching the age of 50 or 60 years, the systematic ingestion of salicylates, combating besides every fresh infection at once energetically with sodium salicylate, will unquestionably prolong life materially, barring accidents. He advises for this to take a powder twice a day, the prescription being 30 gm. (463 grains) sodium salicylate and 3.6 gm. (57 grains), powder of ipecac and opium; to make xx powders. This internal disinfection strikes at the root of the infection which is responsible for the neurasthenia, nephritis, appendicitis or other morbid conditions. Among the arguments presented to sustain this advocacy of a systematic chronic course of salicylic medication, is that membranous enteritis, a pre-eminently chronic affection, flares up afresh with every febrile sore throat. He regards nephritis as a pneumococcus or staphylococcus infection reaching the kidneys from the throat, and bases treatment thereon, giving salicylates and scrupulously avoiding new infection. His prescription with nephritis is the same, with addition of 6 gm. (90 grains) of hexamethylenamin and having from three to five pills taken each day. The treatment has to be chronic, the same as for appendicitis, but his success in this line, he says, speaks for the logical basis for making the salicylates the panacea for warding off the evil effects of infection in the elderly. The efficacy of many of the new drugs is due to their salicylic content, and strive as we may after new directions for therapeutics, we always come back to the drugs which act as internal disinfectants. Progress will be realized, he thinks, when instead of drugs to act on certain diseases, we classify drugs according to their action on pneumococci, streptococci and other microparasites.

Münchener medizinische Wochenschrift

May 2, LVIII, No. 18, pp. 937-992

76 *Oxygen-Poor Air in Therapeutics. (Therapeutische Verwendung sauerstoffarmer Luft beim Menschen.) A. Schmidt and O. David.
77 Cholera a Nitrite Poisoning. (Neue Beweise für die Verursachung der Cholera durch salpetrige Säure.) R. Emmerich.
78 Fascia Flap to Close Defect in Trachea. (Neues Verfahren zur Deckung von Trachealdefekten.) Hofmeier.
79 Improved Technic for Proctoclysis. (Die rektale kontinuierliche Kochsalzinfusion; der "Tröpfcheneinlauf" unter Kontrolle des Auges.) E. Martin.
80 High Irrigation of the Intestine. (Die hohe Darmspülung und ein Mastdarmrohr für Sphinkterschwäche—Doppelballonsonde.) W. Kausch.
81 *Experiences with Salvarsan. M. Neuhaus.
82 An Immediate Plus a Tardy Reaction to Vaccination. (Die Doppelreaktion bei der Kuhpockenimpfung.) C. v. Pirquet.
83 Post-Mortem Cesarean Section. (Kaiserschnitt an der Toten.) R. Stern.
84 Multiple Mercury Poisoning During Shooting-Match Indoors. (Eine seltene Enstehungsart von Quecksilberintoxikation.) C. Boesl.
85 Infant Dispensaries and Infant Mortality. (Wirksamste Bekämpfung der Säuglingssterblichkeit.) A. Vidal.

76. **Oxygen-Poor Air in Therapeutics.**—Schmidt presents evidence to prove that all the bad effects of high altitudes are due to the lessened atmospheric pressure, while the favorable effects on the blood-producing apparatus and on the respira-

tion are due to the lessened oxygen partial pressure in the lungs. Reduction of the oxygen pressure permits its better absorption by the epithelium of the alveoles. He has consequently constructed an apparatus in which the person breathes. While the atmospheric pressure is maintained at the ordinary level, the air within has only about 12 per cent. of the ordinary proportion of oxygen. In the twenty cases in which he has systematically applied this method of treatment, anemic conditions have shown remarkable improvement, even pernicious anemia, and asthma and chronic bronchitis have also benefited to a notable degree. Chlorosis and bronchitis with emphysema have also responded well to the treatment, he adds.

81. **Salvarsan in Syphilis.**—No unfavorable experiences were encountered in the seventeen cases of syphilitic and parasyphilitic affections of the nervous system in which salvarsan was given by Neuhaus. In another case a patient was admitted to the hospital in an unconscious condition with exophthalmos and choked disk. As a syphilitic factor was surmised, the Wassermann test was applied, but before the finding was learned the patient suddenly died. The reaction was positive; if this had been known in time salvarsan would certainly have been given, but the trouble proved to be a tumor in the hypophysis cerebri, with not a trace of syphilis apparent in any organ. The case teaches that a positive Wassermann reaction alone is not sufficient basis for indicating salvarsan treatment. Neuhaus made five injections in one case, at intervals of about a month, the doses ranging from 0.3 to 0.5 gm. of salvarsan, injected into the gluteal muscles or high in the back.

Therapeutische Monatshefte, Berlin

May, XXV, No. 5, pp. 269-340

86 *Treatment of Acute and Chronic Intestinal Catarrh in Children. L. F. Meyer.
87 *Treatment with Anions. (Ueber Anionen-Behandlung.) P. Steffens.
88 **Foreign Bodies in Bronchi.* (*Zwei bronchoskopische Fälle* von Fremdkörperextraktion.) W. Uffenorde.
89 Hemostyptic Action of Heart Tonics. (Hämostyptische Wirkung von Kreislaufmitteln.) R. von den Velden.
90 Influence of Salvarsan on Intensity of Antibody Production in the *Rabbit*. E. *Friedberger and* N. Masuda.
91 Connection Between Ductless Glands and Lymph Spaces. [illegible]itdrüsen zu den Lymphräumen, mit [illegible] der Hypophysis und der Gehirnven- [illegible]rmeregulationsapparates.) C. Jacobi.

86. **Acute and Chronic Intestinal Catarrh in Children.**—Meyer remarks that the diarrheas of children are the daily bread of the general practitioner, and declares that the practice of restricting the children to "flour soup" (browned flour with butter and water to make a soup) after a day of restriction to tea alone, is what often transforms a harmless acute enteritis into a chronic catarrh. He is convinced that excessive carbohydrate fermentation is the primary cause of severe dyspeptic disturbances, both in infants and older children. The physiologically weak intestine of the infant and the intestine of the older child, after it has been weakened by severe disease, behave alike in respect to carbohydrates. Schmidt says that at all ages disturbances in the digestion of carbohydrates entail most readily intestinal catarrh, as the starch waste in the bowel putrefies so easily. Meyer also strikes milk from the diet in the diarrheas of children for at least a week after the stools are normal once more. The albuminous type of foods, with fat, but very little carbohydrates, should be the main reliance. The food should all be put through a hair sieve for infants and through an ordinary sieve for older children. He allows by the second day two tablespoonfuls of white cheese with a slice of white bread, mixed with a little warm saccharin water and put through a sieve; the third day bouillon with one or two tablespoonfuls of boiled or raw meat, all sieved. By the fourth day he permits addition of two tablespoonfuls of spinach or turnip with a banana. The above is the diet for a child of 4 or 5; it represents about 1,204 calories, which is not much below the normal ration of 1,380 calories for a child of this age, but the proportion of carbohydrates is scarcely a tenth of that in the ordinary ration. In his extensive experience this albuminous type of diet has proved its usefulness in acute cases and is far superior to the "flour-soup" diet in the subacute and chronic cases. He has never known it to fail to date.

87. **Anion Treatment of Rheumatism and Neuralgia.**—Steffens applies treatment with the negative pole of an electric current with high tension and reports successful clinical experience with it. He believes that the efficiency is due to the same elements as in the radio-active mineral waters, as he describes in detail.

88. **Foreign Bodies in the Bronchi.**—Uffenorde reports two instructive cases to impress on general practitioners the importance of suspecting a foreign body as the cause of the disturbances in puzzling cases and the importance of immediate visual inspection of the region; every moment's delay is dangerous. Everything should always be prepared for tracheotomy at once when the attempt to extract the foreign body has not proved successful. In one of the cases reported the presence of the foreign body was not suspected for three months. The mother had mentioned at one time that the child might have "swallowed" part of a hook-and-eye fastening, but this had been disregarded. The foreign body changed its position occasionally, sometimes causing suffocation, and then would follow a period free from symptoms. The diagnosis had been tracheobronchitis or diphtheria. When the foreign body was finally recognized it was planned to extract it with the use of the big magnet used for the eye, but an emergency tracheotomy had to be done before this was practicable. The other child had aspirated a bean into the bronchus and it had swelled so that the vocal cords did not permit its extraction and tracheotomy had to be done. The healing of the wound was delayed by a phlegmonous complication, and during the fourth week fatal convulsions developed. In future, Uffenorde says, he will not attempt the removal by the mouth of a foreign body that can swell if it has been in the air passages over twenty-four hours.

Therapie der Gegenwart, Berlin

May, LII, No. 5, pp. 193-240

92 Medical Education: President's Address at Internists' Annual Meeting. (Eröffnungsrede des 28. Kongresses für innere Medizin.) L. Krehl.
93 *Hemorrhagic Purpura After Injections of Fibrolysin. K. Friedmann.
94 Epidemic Poliomyelitis. (Akute epidemische Kinderlähmung.) P. Krause. Commenced in No. 4.
95 *Salvarsan in Recent Syphilis. (Was leistet das Salvarsan bei der Behandlung der frischen Syphilis?) A. Blaschko.

93. **Hemorrhagic Purpura After Injections of Fibrolysin.**—Friedmann's patient was a woman of 67, healthy until a rheumatic affection developed in the shoulders and hip joints, which proved rebellious to the salicylates. In the course of the third month she was given a course of baths, superheated air and massage, supplemented by injections of fibrolysin, according to directions, every second day. After 10 ampoules of fibrolysin had been injected, the patient was much improved and left the institution. She returned in less than a month with recurrence of the chronic rheumatism, and after a course of 10 ampoules of radiogen, with scarcely any benefit, the fibrolysin was resumed. Each injection was followed by headache and some malaise, and this became quite severe by the tenth injection of the second course, and severe hemorrhagic purpura developed the next day with the general condition much impaired, and blood perceptible in the urine and stool, but the rheumatic trouble had permanently disappeared. The purpuric symptoms kept up severely for nearly two weeks, but then all subsided. A total of nineteen injections of fibrolysin had been made, the last one four months after the first.

95. **Present Status of Salvarsan in Treatment of Recent Syphilis.**—Blaschko declares that the time is still too short to determine whether the syphilis apparently cured by the salvarsan has been actually conquered by the abortive treatment, but it certainly in many cases puts an end to all the visible symptoms of early syphilis. Its disadvantages are the rapid letting up of its action, as evidenced in the early development of secondary symptoms, and the injury of the nervous system, especially of the optic and auditory nerves, observed in some cases. He advocates a combination of salvarsan and mercury as early as possible after infection, but states that there is no compelling reason for giving salvarsan at all except where mercury is not applicable.

Wiener klinische Wochenschrift, Vienna

May 4, XXIV, No. 18, pp. 619-654

96 Physiologic Action of Mountain Climate. A. Durig.
97 Pathogenesis of Cretinism. A. Flinker.
98 Case of Tetany After Injection of Adrenalin (Epinephrin) in Osteomalacia. R. Marek.
99 Pigmented Blood-Cells in Urine: the "Heart Defect Cells." (Vorkommen von "Herzfehlerzellen" im Harn.) E. Koller.
100 The Meiostagmin Reaction in White Rats After Removal of Both Suprarenals. F. Cattoretti.

Zentralblatt für Chirurgie, Leipsic

May 6, XXXVIII, No. 18, pp. 629-660

101 *Cause of Inguinal Hernia. (Zur Aetiologie des Leistenbruches.) A. Hagentorn.

101. **Etiology of Inguinal Hernia.**—Hagentorn has made a practice of examining the other side in operating for inguinal hernia of late, and states that in four out of ten cases he has found a pouch of peritoneum on the sound side exactly like the hernial sac, only much smaller and of course empty. He regards this as a congenital peritoneal process which merely awaits favoring conditions to develop into a typical hernia. The size and shape of the pouch exclude a mechanical origin for it.

Zentralblatt für Gynäkologie, Leipsic

May 6, XXXV, No. 18, pp. 673-696

102 Treatment of Eclampsia by Excising the Breasts. (Die Heilung der Eklampsie durch die Entfernung der Brüste.) A. Herrenschneider.
103 Raising the Pelvis or Knee-Elbow Position for Delivery in the Home. (Beckenhochlagerung oder Knie-Ellbogenlage bei Entbindungen im Privathaus.) W. Liepmann.

Gazzetta degli Ospedali e delle Cliniche, Milan

April 27, XXXII, No. 51, pp. 539-546

104 Traumatic Tuberculosis. A. Salomont.

April 30, No. 52, pp. 547-562

105 Etiology of Pellagra. (Le critiche di L. W. Sambon alle teorie maidiche.) M. V. Carletti.
106 Familial Hemoglobinuria from Quinin in Malaria. M. Angelo.

May 2, No. 53, pp. 563-570

107 Asthenia of Connective Tissue in Origin of Hernia. (Sulla astenia connettivale con speciale riguardo alla patogenesi dell'ernia.) P. Leonardo.

Policlinico, Rome

April 30, XVIII, No. 18, pp. 553-584

108 Case of Brocq's Parapsoriasis. E. Toscani.
109 Two Cases of Oriental Sore. (Due casi di Bottone di Oriente.) F. Miceli-Capurbano.

April, Surgical Section No. 4, pp. 145-192

110 Experimental Research on Changes in Kidney Functioning with Disease of One Kidney. (Variazioni della funzionalità renale, nelle nefropatie unilaterali.) S. Marinacci.
111 *Origin of Neoplasms. (Sui recenti contributi alla dottrina dei neoplasmi.) G. Fichera. Commenced in No. 3.

111. **Origin of Neoplasms.**—Fichera has continued his research on this subject, especially with embryonal and fetal tissue grafts. He thinks it is significant that spontaneous malignant tumors are extremely rare in young rats, and that preceding ingrafting of embryonal or neoplastic tissue frequently protects susceptible rats against inoculation of cancer tissue; also that subcutaneous or local injection of autolyzed homogeneous cancer or fetal tissue determines the involution of ingrafted cancer tissue which, under other circumstances, gives 100 per cent. of positive results. His experiences in these various lines have convinced him that the cancer-producing property can be corrected, at least temporarily, by supplying the cellular products of secretion and histolysis, the lack of which is the cause of the cancerous growth, and he describes his work in this line.

Riforma Medica, Naples

April 24, XXVII, No. 17, pp. 449-476

112 *The Tourniquet Sign of Hemorrhagic Disease. (Sul valore clinico e sulla patogenesi di un nuovo segno del prof. Grocco—segno del laccio.) C. Frugoni and Giugni.
113 Action of Chloroform on the Glycogen of the Muscles. (Azione della cloroformizzazione sul glicogeno muscolare.) P. Colace
114 *Two Cases of Primary Tuberculosis of the Striated Muscles. G. Spelta.

May 1, No. 18, pp. 477-504

115 Experimental Research on Influence of Quinin on Regeneration of the Blood in Anemia from Venesection. (Influenza della chinina sulla rigenerazione del sangue nelle anemie da sottrazioni sanguigne.) D. De Sandro.
116 *Cardioptosis. (Morbo del Rummo.) G. Fiorito.

112. **The Tourniquet Sign of Disease with Hemorrhagic Manifestations.**—Frugoni and Giugni discuss the *mechanism* and significance of the local phenomena which develop in an affection with a tendency to hemorrhagic manifestations when a slightly constricting band, a lacet, is applied to the limb above, as described in The Journal, Feb. 18, 1911, page 545.

114. **Primary Tuberculous Lesion in Muscle Tissue.**—In the first of the two cases reported the lesion developed in the abdominal wall of a boy of 8, in the rectus, and was excised about a month after it had been first noticed. It contained numerous tubercle bacilli. The other patient was a man of 40, and the lump was below the left axilla, about the size of a hen's egg, in the serratus magnus. There did not seem to be any other manifestations of tuberculosis in either case, and both patients were apparently cured by excision of the lesion.

116. **Cardioptosis.**—Fiorito analyzes a typical case of downward dislocation of the heart, the anomaly to which Rummo called attention in 1900. The patient was a man of 22 with pronounced neurasthenia and symptoms on the part of the heart after exercise, pulsation in the epigastrium and discomfort when the food passed from the esophagus into the stomach. He found that this discomfort could be avoided by bending forward as he swallowed the food; this evidently removed the pressure of the sagging heart from the lower part of the esophagus. There were also signs of gastro-intestinal atony. The apex beat was in the sixth interspace and very weak.

Hospitalstidende, Copenhagen

April 19, LIV, No. 16, pp. 417-440

117 Care After Radical Operation on the Middle Ear. (Efterbehandlingen af Radikaloperationen af Mellemøret.) J. Boysen.
118 *The Wassermann Reaction with Serum from Patients Under Influence of Chloroform or Ether. H. Boas and T. Petersen.

April 26, No. 17, pp. 441-472

119 *Return Cases of Diphtheria. J. Sørensen.
120 The Cerebrospinal Fluid in Syphilitics. (Undersøgelser af Spinalvæsken ved Syfilis uden Nervesymptomer.) H. Boas and H. Lind.

118. **Wassermann Reaction in General Anesthesia.**—Boas and Petersen obtained a positive reaction in three out of sixty patients tested while under the influence of general anesthesia. In all the cases chloroform had been used, and a week later the reaction was negative again. All the patients tested were free from any history or signs of syphilis.

119. Summarized in The Journal, May 6, 1911, page 1370.

Hygiea, Stockholm

April, LXXIII, No. 4, pp. 385-512

121 Treatment of Dislocation of the Lens. (Linsluxation uti främre kammaren.) K. Stålberg.

Norsk Magazin for Lægevidenskaben, Christiania

May, LXXII, No. 5, pp. 529-624

122 Treatment of Fractured Radius. H. Schilling.
123 Technic of Sclerotomy for Glaucoma. (Om min teknik i Sclerectomia limbalis for glaukom.) S. Holth.
124 Rupture of Small Intestine from Contusion. (Ruptura intestini tenuis, frembragt ved ytre stump vold.) C. Johannessen.

Ugeskrift for Læger, Copenhagen

April 20, LXXIII, No. 16, pp. 545-580

125 *Rheumatic Symptoms in Muscles and Fibrous Tissue and Massage. (Om reumatiske Lidelser i Muskler og fibrøst Væv og deres Behandling med Massage.) C. Heyerdahl.

April 27, No. 17, pp. 581-630

126 *Trauma in Origin of Cancer from Standpoint of Insurance. (Den forsikringsmæssige [illegible] m Aarsag til ondartede Svulster.)
127 Motor Gastric Disturbances [illegible] (Retention i Ventriklen ved Ta[illegible]
128 Treatment of an Inoperable Lymphosarcoma with Coley's Fluid. P. H. Perch.

125. **Massage in Treatment of Muscular Rheumatism.**—Heyerdahl reviews the Danish literature on this subject in the last five years, and reports excellent results from moderate massage. The rheumatic affection is localized both in muscle and fibrous tissue, the main symptoms being pains, tenderness and functional disturbances. They differ from nervous disturbances in the hindrance to the movements of the part, and in the fact that the rheumatic pains are most severe in the morning or after rest and are improved by work, contrary to what is observed in neuritis. The rheumatic pain in the head radiates from the back of the neck upward, while the neurasthenic headache spreads sideways over to the forehead, back of the eyes and thence upward to the top of the head. The

rheumatic pains also occur only with certain movements, while the nervous accompany any movement. The lumps and nodules felt by some in the muscles, the seat of the rheumatism, he thinks are merely the natural contraction of the muscle under the influence of the palpation. Local tenderness is not a reliable means of differentiating between nervous and rheumatic affections, he declares, as there are so many points which are sensitive in every one. Rest is useful in nervous and periosteal affections, while the muscular profit by a certain amount of exercise.

126. **Trauma in Origin of Cancer.**—Tscherning reviews ten cases in which cancer developed at the point of a trauma, and a claim was made for industrial insurance money. In only a few of the cases was a causal connection probable. In one case the trauma caused a fracture of the femur at a point which proved to be already the site of a sarcoma and the limb was exarticulated—the trauma in this case revealed the malignant disease long before it would otherwise have been detected. In the case of a man of 36, previously healthy until a block of ice fell against the lumbar region, a sarcoma gradually developed in the right kidney and the kidney was removed the fourth month, but the patient succumbed to metastasis nine months after the accident. An insurance indemnity was awarded in this case, the death being regarded as the result of the injury, but this was accepted in only one of the other cases.

Books Received

Books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. Selections will be made for review in the interests of our readers and as space permits.

A Practical Medical Dictionary of Words Used in Medicine, with Their Derivation and Pronunciation, Including Dental, Veterinary, Chemical, Botanic, Electric, Life Insurance and Other Special Terms; Anatomic Tables of the Titles in General Use and Those Sanctioned by the Basel Anatomic Convention; Pharmaceutical Preparations, Official in the U. S. and British Pharmacopeias and Contained in the National Formulary; Chemical and Therapeutic Information as to Mineral Springs of America and Europe, and Comprehensive Lists and Synonyms. By T. L. Stedman, A.M., M.D., Editor of "Twentieth Century Practice of Medicine" and the *Medical Record*. Leather. Price, $5. Pp. 1,000. New York: William Wood & Co., 1911.

Golden Rules of Pediatrics. Aphorisms, Observations and Precepts on the Science and Art of Pediatrics. Giving Practical Rules for Diagnosis and Prognosis, the Essentials of Infant-Feeding and the Principles of Scientific Treatment. By J. Zahorsky, A.B., M.D., Clinical Professor of Pediatrics, Medical Department Washington University, St. Louis. With an Introduction by E. W. Saunders, M.D., Emeritus Professor of Diseases of Children and Clinical Midwifery, Medical Department Washington University. St. Louis. Cloth. Price, $2.50. Second Edition. St. Louis: C. V. Mosby Co., 1911.

A Tuberculosis Directory. Containing a List of Institutions, Associations and Other Agencies Dealing with Tuberculosis in the United States and Canada. Compiled for the National Association for the Study and Prevention of Tuberculosis. By Philip P. Jacobs, Ph.D., Assistant Secretary. Cloth. Price, 50 cents. Pp. 331. New York: National Association for the Study and Prevention of Tuberculosis, 105 East Twenty-Second St., 1911.

Year-Book (1911) Maimonides Hospital. History, Achievement, Prospects. Published b [illegible] Hospital Association for the Information of its [illegible] the Cooperation of the General Public. Paper. [illegible] g Director, 1145 Blue Island Ave., Chicago.

Yellow Fever and Its Prevention. A Manual for Medical Students and Practitioners. By Sir Rubert W. Boyce, M.B., F.R.S., Holt Professor of Pathology, University of Liverpool. Cloth. Price, $3.50 net. Pp. 380, with 61 illustrations. New York: E. P. Dutton & Co., 1911.

Le Secret de l'Univers devant la Science Officielle. La Mécanique Universelle Dévoilée d'après Clémence Royer et Mise à la Portée de Tous. Par Emile Hureau. Paper. Price, 3 francs 50. Pp. 200. Paris: Jules Rousset, 1 rue Casimir-Delavigne, 1911.

Precis d' Auto-Suggestion Volontaire. Education Pratique de la Volonté. Par le Dr. Géraud Bonnet, d'Oran, Officier de l'Instruction publique. Second Edition. Paper. Price, 3 francs 50. Pp. 302. Paris: Jules Rousset, 1 Rue Casimir-Delavigne, 1911.

Fourteenth Annual Report of the Boston Infirmary Department of the City of Boston. For the Year Ending Jan. 31, 1911. Cloth. Pp. 52, with illustrations. Charles E. Donlan, Superintendent.

Twenty-Fourth Annual Report of the State Board of Health of the State of Ohio. For the Year Ending Dec. 31, 1909. Cloth. Pp. 479. C. O. Probst, Secretary, Columbus, Ohio.

Sanitary Survey for Schools and Diagnostic Table. Paper. Pp. 15. Price, $1 per dozen. San Francisco: Whittaker & Ray-Wiggin Co., 1911

New Patents

Recent Patents of Interest to Physicians

970781. Appliance for treatment of spinal affections. Joseph W. Battershall, Attleboro, Mass.
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973456. Vaginal syringe. Frank A. Neveu, Salt Lake City, *Utah.*
973296. Surgeon's scissors. George H. *Peddler,* Parry, N. Y.
973307. Thermometer case. Francis Ruddy, Watertown, N. Y.
972954. Making hypochlorous acid. Henry V. Walker, Brooklyn.
973328. Emulsifier. Joseph Willmann, Derby, Conn.

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DIET IN ACUTE INFECTIOUS DISEASES

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Feeding the sick is both a science and an art; a science in so far as it takes cognizance of the great laws of supply and demand in a physiologic sense; an art in so far as it affects the application of these laws to the individual.

All matter is endowed with a certain amount of energy, which manifests itself differently, under different conditions. Certain chemical substances, by virtue of the nature of the elements that compose them and their relationship to each other, that is, their structure, have the power to produce one or more manifestations of energy. They are said then to have potential energy.

To give rise to the manifestations of energy, these substances must have a certain degree of instability or lability; that is, must be capable under definite conditions of undergoing changes in structure, disruptions, etc., all of which give rise to motion.

The substances of which our bodies are composed and food on which they continue to exist are chemical substances of a highly labile character, possessing potential energy, which in the process of catabolism or breaking down, give rise to motion, which conveyed to other bodies is manifested as work or is expressed as heat, to neglect the lesser forms of energy in the human body, such as the electrical.

Energy is as indestructible as matter itself. It can be transformed from one kind into another, but it cannot be destroyed nor yet created anew. Different manifestations of energy have definite quantitative relationships to each other, as Joule's great experiments on the mechanical equivalent of heat showed. He demonstrated that the amount of work necessary to raise 1 gm. of water through 1° C. was that required to raise 42.55 gm. through 1 cm. of distance.

I have said that the conversion of the potential energy of the body or of the food into one or the other manifest forms of energy occurs under definite conditions. The definite condition in the body which gives character to its manifest energy is the "vitality" of the cell. Moore[1] calls the living cell an "energy transformer," and without entering into the controversy about the significance of "vitalistic phenomena," I shall quote his idea, which is as follows:

> The living cell is not a peculiarly constructed membrane obeying, even where it seems most directly not to obey, the physical laws of diffusion and osmosis; but is an energy machine or transformer by virtue of the operation of which a form of energy appears, peculiar in its manifestations and phenomena to living matter.

The kind of energy that this transformer, the living cell, produces out of the potential energy of the body and its foodstuffs is almost entirely thermokinetic, that of work and heat, and as we can express work in terms of heat, we may reduce the total activities of the body to terms of heat and express them as equal to so many "calories" or heat units.

The "calorie" is a term used to express that amount of heat which is required to raise 1 c.c. or gm. of water through 1° C. More properly, this is termed a "small calorie," while the term "large calorie" is used for the amount required to raise 1 kilogram or 1 liter of water through 1° C., i. e., 1 large calorie equals 1,000 small calories.

THE CALORIC BALANCE OF THE HUMAN BODY

As has just been said, the human body (the cells collectively) is an energy transformer; or to put it in other terms, the human body is like a steam-engine, consuming fuel for the purpose of doing work and producing heat; but the human body differs from a steam-engine in this, that, lacking fuel, it will consume its own structure up to the point of a complete collapse of the mechanism; so that, to maintain the integrity of the transformer or engine, it is necessary that the output by it of work and heat shall be exactly met by the fuel afforded it. To know the amount of food the human body requires, then, we must know the amount of work it does and the amount of heat it elaborates in a given time.

Now Nature has given to the individual a most amazing regulator to adapt the supply to the demand on which no device of man can ever improve; that is, appetite. When one thinks that day after day and year after year, the body retains a fixed or approximate weight, under the most varying demands of work, and consequently of food, under the guidance of this monitor, one is lost in admiration; but as there are times, in the stress of disease, that this regulator fails or by the dictates of false theories, is disregarded, we need to know what the demands actually are, in order that we may guarantee that they may be met.

The determination of the caloric output in man has been made possible by the use of the calorimeter chamber of Pettenkofer and Voit, elaborated and perfected by Atwater and Benedict, whose work in this field has been the most extensive and accurate ever done, and whose studies of food-values have been accepted by the government as standards; and by the study of the respiratory quotient determined by the simpler apparatus of Zuntz.

Still another way to determine the caloric needs of man is to determine the heat values of the foods habitually taken by normal individuals in different callings.

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[1] Recent Advances in Physiology and Biochemistry, edited by Leonard Hill, London, 1908.

These analyses of the average intake and output agree wonderfully well. For men doing light or sedentary work, clerks, professional men, literary men, the requirements are between 2,400 and 2,600 calories; for those whose work is a little more arduous, as machinists, shoemakers and the like, 2,900 to 3,100 calories; for those doing hard muscular work, smiths, masons, etc., 3,300 to 3,600 calories, while those doing very hard work run up much higher, the Maine woodsmen demanding some 7,000 to 8,000 calories. Football players require nearly as much.

What concerns us most is the requirement of a man at rest, for this is the condition in which we find our patients. Rest, too, is a relative term, and as used here means that degree of activity which obtains when a patient is put to bed, which is a very different state from complete muscular relaxation or that prevailing in sleep. At rest the demands are about 2,300 calories or 33 calories per kilo of body weight, the average man weighing 70 kilos or 150 pounds.

A fact of prime importance to us as practitioners is that educed from the work of Magnus-Levy,[2] *namely, that the total metabolism is the same in the sick man as in health, so far as the demands of muscular effort and heat production go; but, as we shall see, fever and toxemia increase these demands.*

The caloric requirement of an individual depends not only on the amount of work he does, *but also on the size or bulk of his body*; and while we have spoken of the requirements of a man at rest as 2,300 calories, it is meant for a man of average weight, while such wide variations as a man of 200 pounds and a woman of 100 pounds are common in our every-day experience. The requirements are best thought of in units of weight, as so many calories per kilo—for a man at rest 33 calories per kilo.

Here, too, certain modifications have to be made, as in the excessively obese, whose fat is hardly to be considered in the same light as the more actively metabolizing tissues.

The figures "33 calories per kilo" obtain only for adults. In the young the growth has to be taken into consideration, which in certain periods is more intensive than in others; e. g., in the first three months of life the demands are about 110 calories per kilo; in the second three months, 100; in the last half of the first year 90; at the end of the second year, 75 to 80; at 10 years, 60, and at 14 years, 52. Indeed, as Cohnheim observes, the boy of 10 requires as much food as the adult who does not do muscular work, while the youth of 14 to 16 must eat 3,000 calories, about one-fourth more than his father who leads an intellectual life.

In consideration of the fact that in all warm-blooded animals the production of heat is the most imperative function of metabolism, and further that the dissipation of it is largely a function of the skin, there stands a relationship between these two, closer than that between metabolism and weight. In a small sphere the surface is greater, proportionally to the contents, than in a large one, for the contents increase as the cube of the radii, while the surfaces increase as the squares, so that in the smaller bodies the radiation is relatively greater and the heat production must be relatively more intense.

So it is that we find in the infant a requirement of 100 calories against 33 in the adult, but when the surfaces are compared, it is found that reckoned in calories per square decimeter, it is about the same from 10 weeks to adult life, 13 to 14 calories per square decimeter (Pfaundler and Schlossmann). The unit of weight, is, however, so much more readily obtained that we use it in preference.

Metabolism experiments carried on during rest have shown that whether reckoned on the one unit or the other they are always the same for all individuals, men or women, sick or well. It must be remembered, however, that the conditions of the experiment produce more nearly real rest than obtains in the sick-room. Differences of temperament determine very different degrees of muscular activity, while certain phases of an acute infection, like delirium, become a matter of serious import in the consideration of rest.

As has been said, all this energy manifested as work and heat by the body, resides potentially in and is derived from the food. The food, then, must furnish *periodically just what the body has expended in order to keep the latter intact*, for if the food is deficient, the deficit will be made up out of the body itself, as long as it can stand the drain. Our patient at rest, then, must have 2,300 calories of food a day.

CALORIC VALUE OF FOODSTUFFS

The foodstuffs are divided into three classes, fats, carbohydrates and proteins. Strictly speaking, salts and water are foodstuffs, but they have no caloric value.

Rubner's figures for the caloric value of foodstuffs still stand to-day, such slight modifications as have been made having but little practical significance. They are as follows:

1 gm. of fat furnishes 9.3 calories.
1 gm. of carbohydrate furnishes 4.1 calories.
1 gm. of protein furnishes 4.1 calories.

With these figures and a table of the average composition of the common foods, like those of Atwater, published by the U. S. Department of Agriculture, it is no difficult task to arrange a dietary.

The first step, then, in arranging a diet in acute infectious diseases, is to provide, as a minimum, as many calories as are demanded by the individual when at rest in health, 33 calories per kilo, or 2,300 in the average man.

A diet must not only contain sufficient heat units, it must also be properly balanced with reference to the three foodstuffs, and of these three, the most important is protein.

PROTEIN NEEDS

Two facts of great importance are to be kept in mind, which differentiate protein from the other foodstuffs; first, in the adult, under normal circumstances, the daily demand for protein is fixed and does not vary with the amount of work done, as is the case with the other two foodstuffs; and second, there is no provision for a storage of an excess of protein, as is the case with fats and carbohydrates. Therefore, any excess must be catabolized and eliminated.

This daily amount of protein amounts to about 100 gm., or 16 gm. of nitrogen. Voit's figures are 118 gm. of protein as ingested, which, allowing for the amount found in the stools, gives about 100 gm. net. The analysis of dietaries the world over has given a remarkable unanimity of results, which have confirmed Voit's figures.

That a man may perform hard work for months and remain in excellent condition on an amount of protein far less than this, one-half and even less, has been demonstrated by Chittenden in the most elaborate and extensive set of experiments ever carried out on this subject. Physiologists, however, though they must accept the possibility of this low protein need as a fact, are not yet inclined to argue from this demonstration that such an intake would subserve the interests of the organism in the long run to the best advantage.

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[2] Quoted from Otto Cohnheim: Die Physiologie der Verdauung und Ernährung

FUNCTIONS OF PROTEIN

Protein subserves three important functions. First, it furnishes substance, building material, to the body. This is spoken of as the "storage" of nitrogen. Second, it repairs the daily waste of the body, the wear and tear of the machine. Third, it furnishes heat in its combustion, that is, is a fuel.

It is only in early life that the first of these functions, storage, is of prime importance. At that time it is one of the most imperative of physiologic functions. The continuance of growth in length, when weight may be stationary or regressive, is a familiar phenomenon to the pediatrist, expressive of the fact that the protein is seized on with avidity even when the fuel-value of the food is insufficient for body needs. It is a curious fact that the actual amount of protein ingested in infancy is about the same month after month, but the amount devoted to storage decreases, while that used for wear and tear increases. In the first two weeks over 75 per cent. is stored; at two months 40 per cent.; at five months 23 per cent. When an individual has attained his growth, storage ceases, except on special occasions; these are during pregnancy and lactation, in the establishment of hypertrophy of groups of muscles, as in the training of an athlete, and during convalescence from wasting disease or after a long fast.

The second function, repair of wear and tear, is the important one in adult life. This has to do with maintaining the integrity of the machine as a whole and has nothing to do with the amount of muscular work, so it is a daily constant, regardless of the amount of exertion the body has been put to. It is for this purpose that the food should contain 100 gm. of protein a day in the adult diet.

The third function is incidental. Protein does furnish heat, but it is not an economical source of supply. In the infant the proper amount of protein furnishes about 7 per cent. of the calories; in the adult about 14 per cent.

The reason that protein is not an economical fuel lies in that peculiar property known as its "specific dynamic action." When food is ingested, the physiologic processes sequential to it produce heat. The amount of such heat induced by fat and sugar is slight and negligible, but not so protein. The ingestion of this substance gives rise to a production of heat equal to a trifle more than 30 per cent. of its caloric value.

The source of this heat is a matter of dispute, but it would seem to be due to the work of the glands of secretion and to cell activities with which we are less acquainted. Lusk has intimated that in the case of protein it may be in part due to the denitrogenization of the amidobodies. This heat is lost to the body, is waste heat, under the conditions of temperature and physical regulation of heat in which man lives. He cannot utilize this heat for purposes of cell-life.

This loss of heat by the specific dynamic action of protein may be expressed in this way: that to get the caloric value of 100 gm. of protein one must ingest 140 gm. of the food. It is this increased heat that must be dissipated that has led naturally to a limitation of meat diet in hot weather and to its general elimination from the diet of fever.

The second step, then, in arranging a diet in the acute infectious diseases, is to provide enough protein to replace the wear and tear, an amount which hardly differs from the general demand in health. It may be placed at 65 to 80 gm.

Fat and carbohydrates differ from protein in two very striking ways as articles of diet; first, when utilized by the body the oxidation is complete and they are eliminated as carbon dioxid or water, while the nitrogenous moiety of the protein is not completely oxidized and entails work on the part of the kidney to eliminate it, which the other foodstuffs do not require; second, an excess of fat and sugar beyond immediate needs is stored in the body as fat and does not demand prompt elimination like the excess of protein.

The proportions of the three foodstuffs in an average dietary is protein 100 gm., fat 50 gm., and carbohydrates 400 to 500 gm., giving in the neighborhood of 3,000 calories.

MILK

No food in infectious diseases has been used so much as milk, and frequently to the exclusion of all others.

An excellent milk will show on analysis about 4 per cent. of fat, 4.5 per cent. of sugar and 3.5 per cent. of protein, or, to the liter, 40 gm. of fat, 45 gm. of sugar and 35 gm. of protein. Using Rubner's caloric values as given above, we see that the caloric value of a liter of milk is 700: reduced to quarts, there are about 640 calories to the quart or 20 to the ounce—a convenient figure as a mnemonic.

A liter contains 35 gm. of protein.

It will be seen presently that a low estimate of the caloric needs in fever of an average individual is 3,000. To meet this one would have to administer over a gallon of milk, which would contain over 140 gm. of protein.

These figures sufficiently demonstrate how ill adapted an exclusive milk diet is to meet the needs of an individual suffering from an acute infection.

STANDARD PORTIONS

When one comes to study the tables of composition of foodstuffs, it is plain that the establishment of a dietary to respect the caloric requirements and the protein needs of a patient is a task outside the time and patience of an active practitioner. It was with an appreciation of this fact that Professor Irving Fisher,[3] of Yale, published his tables of standard portions.

It will be seen from the table representing a few of these articles selected how remarkably the ordinary servings of common articles of food, or at least multiples or simple fractions of them, amount to just 100 calories.

In some of our hospitals the nurses are now instructed to bring food to the patient in these portions, so that the estimate of the daily intake can be easily made with a degree of accuracy that answers all practical purposes, and because the daily exhibition of these portions is an education to both the medical and nursing staffs. It soon becomes an easy matter to think of the ordinary articles of diet in terms of units of 100 calories.

The object of our consideration is a patient suffering from an acute infectious disease. So far I have discussed only the food requirements of a man in health at rest. Such a discussion is relevant to this subject, however, because the requirements of the patient are the same plus a certain additional need determined by the infection itself.

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[3] Fisher, I.: The Journal A. M. A., April 20, 1907, p. 1316.

TABLE OF FOOD-VALUES IN UNITS OF 100 CALORIES	Protein in Gm.
Milk, 5 oz	5.
Cream, 16 per cent. (2 oz.)	1.5
Buttermilk, *one and one-half glasses (9.5 oz.)*	8.
Koumis, one glass (7 oz.)	5.
Whey, two glasses (13 oz.)	3.5
Eggs, one and one-half	10.
Whites of eggs, 6	24.
Yolks of eggs, 2	4.5
Oatmeal, one and one-half serving (5.5 oz.)	4.25
Boiled rice, ordinary cereal dish (3 oz.)	2.5
Hominy, large serving (4.2 oz.)	2.5
White bread, home made, one thick slice (1.25 oz.)	3.2
One small Vienna roll (1.25 oz.)	3.2
Butter, one pat (1.5 oz.)	0.0
Sugar, three teaspoonfuls, one and one-half lumps (0.8 oz.)	0.0
Oil, one-third ounce	0.0
Codfish, two servings (5 oz.)	23.
Halibut steaks, one serving (2.8 oz.)	15.
Mackerel, Spanish, one serving (2 oz.)	12.2
Shad, one serving (2.1 oz.)	11.2
Salmon, small serving (1.5 oz.)	7.3
Oysters, 12	12.
Roast beef, ordinary serving (1.8 oz.)	10.
Small sirloin steak (1.4 oz.)	7.5
Leg of lamb or mutton, ordinary serving (1.8 oz.)	*10.*
Lamb chop, one, small (1 oz.)	6.
Bacon, small serving, medium fat (0.5 oz.)	1.5
Chicken, broiler, edible portion, large serving (3.2 oz.)	19.
Turkey, large serving (1.2 oz.)	7.
Potato, baked, one, good size (3 oz.)	3.75
Potato, sweet, baked, one-half average potato (1.7 oz.)	1.5
String beans, five servings (16.66 oz.)	3.75
Spinach, two ordinary servings (6.1 oz.)	3.7
Peas, green, one serving (3 oz.)	5.7
American or Swiss cheese, 1.5 cubic inches (0.75 oz.)	6.
One baked apple, 3.3 ounces	0.5

There are four factors that enter into the problem of feeding in acute infectious diseases that render it distinct. They are (1) gastro-intestinal disorders; (2) pyrexia; (3) toxemia; (4) starvation. The last of these it is the plea of this paper to prevent.

Starvation in fever has been a tradition in medicine that has lost but little authority with the passage of time and finds wide acceptance to-day. The legitimacy of such practice I wish to examine.

DISTURBANCE OF GASTRO-INTESTINAL FUNCTION

It cannot be denied that the gastro-intestinal tract is not indifferent to the effects of the infection. We are all familiar with the dry mouth, the coated tongue, the anorexia and the tympanites of many of the patients.

One feels little inclined to urge food on so unwilling a receptacle and this feeling has plead potently with many practitioners to establish insufficient, often starvation dietaries.

Investigation has shown that the salivary secretion is lessened, that the output of hydrochloric acid is diminished and the motility of the distal portion of the intestine is impaired. It has been claimed that the motility of the stomach, too, is prejudiced (von Leyden and Klemperer), but von Noorden maintains that that has not been the case in the patients he has studied.

More important still, assimilation seems to be good, and von Leyden and Klemperer[4] found that in different patients with high fever 89 per cent. to 94 per cent. of easily digestible fat was absorbed and 91 per cent. of protein. Moreover, they found no carbohydrate in the stools unless excessive amounts had been ingested or diarrhea prevailed.

Taking these data and what I have seen of liberal feeding in febrile conditions, I am convinced that the ability of the alimentary tract to perform its normal functions in fevers has not been duly appreciated and the withholding of food on the supposition that this organ is crippled is unjustifiable.

I do believe that in the incipiency of an acute infection these functions are more in abeyance than later, but that they quickly become competent. I also believe that the state of the mouth and digestion is due in no small measure to an insufficiency of water and is greatly aggravated, not by the giving of food, but by the withholding of food, which entails a destruction of body tissue and sets on foot abnormal metabolic processes.

FEVER

The term "fever," as ordinarily used, connotes the sum of two distinct factors: (1) pyrexia and (2) toxemia. I wish to discuss them separately, and when, under pyrexia the word "fever" is used, it is to be taken in the sense of an elevated temperature alone, i. e., pyrexia.

PYREXIA

There has been an endless controversy from remote times as to the significance of fever, it being contended on the one hand that it was a deleterious factor in the disease, on the other, that it was beneficial and had a meaning that was to be respected; purposeful, the teleologist would say.

This is not the place to discuss at length fever and its relation to disease, but I am in agreement with the conclusions of careful students of the subject that "fever is a specific reaction against injurious materials which affect the tissues"; that it "is in its essentials a protective reaction," to quote from the excellent article on fever by Dr. W. G. MacCallum.[5]

There has been a wealth of work done to prove this statement, which one will find set forth in detail in the article just referred to and in a critical review of the subject by Hermann Ludke.[6]

Pyrexia below 104 F. is to be let alone; it is useful; above that figure it adds an element of harm and then antipyretic measures are indicated, but not till then. It must be remembered that many so-called antipyretic measures, such as the cold baths, are directed not toward the temperature, but to the circulatory and nervous system, and are of the highest value when these systems are in distress. The phenomena of fever lead rapidly to the assumption that there is a great increase in heat production and a marked retardation of heat dissipation, in other words, a great accumulation of heat in the body. This is not so. The actual increase in the oxidative processes is relatively small, while the relation between heat production and heat dissipation is but little interfered with. What seems actually to take place is the regulation of these processes on a higher level, so to speak; what level, that is, at what temperature, depending on the effects of the toxins on the heat-regulating mechanism. This mechanism, however, under such conditions, does not display the same degree of stability as in the normal individual, but a lability that characterizes the temperature curve in infections, and, indeed, gives their individual stamp to them.

I have said that the increase of heat production in fever is relatively small. The figures vary; sometimes there is no increase, but on the average it amounts to about 25 per cent. This might seem considerable did we not pause to consider that in strenuous muscular exercise the increase of heat amounts to several hundred per cent.; for example, the 8,000 calories of the *Maine* woodsman to the 2,300 at rest.

The fact that such great increase in heat in the normal man causes no rise of temperature shows that the elevated temperature of fever has quite another origin than that of heat production; that it is the result of the toxins and not the heat. However, as our patient is at rest, this 25 per cent. increase has to be added to the 2,300 calories allowed him, in order to make good his daily losses, *so that it may be said that the requirement of the febrile patient is 40 calories per kilo or 2,800 calories, near enough to 3,000 to make that our guide.*

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[4] von Leyden and Klemperer: Handbuch d. Ernährungs-Therap., 1904, ii, 332.

[5] MacCallum, W. G.: Arch. Int. Med., 1909, ii, 569, and the Harvey Lectures, 1908-1909.

[6] Ludke, H.: Ergebn. d. Inn. Med. u. Kinderh., iv, 493.

One other effect of pyrexia I wish to mention; that is, its destructive action on protein. As Lusk says "Infectious fevers are characterized by a toxic destruction of body protein"; but there are three factors concerned in the loss of nitrogen during an acute infectious process; (1) pyrexia, (2) toxins, (3) starvation.

The study of non-toxic fevers, such as are induced by exposure to heat or by puncture of certain parts of the brain, show that the pyrexia can induce protein catabolism, but it seems to demand a temperature of 102 F. or over to bring about this protein loss, and experimentation has shown that a sufficient feeding can control this loss.

TOXEMIA

It was recognized that apart from the effect of pyrexia and apart from starvation, or at least in the presence of food sufficient to meet all the theoretical considerations we have so far set forth, there still continued to be a considerable loss of protein in the acute infectious diseases. This loss came to be accepted as inevitable by the ablest investigators in the field and was attributed to the effects of the toxins and was called the "toxic destruction" of protein. Just how the toxins brought about this protein loss was and is a matter of conjecture. It has been attributed by Krehl to actual cell destruction; by others to an exciting effect on metabolism by the toxins; by others to an expression of the production of antibodies and other protective substances. Certain it is that is it dissociated from the pyrexia, as such; for it is often intense when there is no rise of temperature. Taken with this destruction it has been suggested that a weakened power of regeneration exaggerates the difference between catabolism and anabolism.

STARVATION

This does not belong to the acute infections as a rule, except as it is inflicted on the patient by an insufficient dietary. Energy must be supplied to the body each day and when the food does not do it, the body substance does and the protein is called on to do its share at the sacrifice of cell integrity.

At the present moment one of the most intensely interesting fields of medical research is that devoted to metabolism, the building up and breaking down, anabolism and catabolism, the storage of energy and its dispersion; what one writer has called the "most fundamental characteristic of life, energy-traffic." The intimate processes of protoplasm yield their secrets stubbornly, but we know what they have to work on and we know what they yield back: we know the fuel and the ash, the intake and the output, and from the knowledge of these two, we deduce much that has occurred in the process of the change.

Nitrogen is the basic substance on which the body structure is erected. It is ingested with the food and it is expelled in the urine, the stools and in lesser measure by the skin. In health the intake and output balance each other, and the nitrogen eliminated is divided among a number of combinations which maintain a pretty constant relationship to each other. These nitrogen combinations are spoken of as the "nitrogen partition."

In disease the balance of intake and output is disturbed and the relationship of the combination undergoes a change, so that the study of the nitrogen partition in disease is a tree that bears much fruit.

I have said that the nitrogen elimination is divided among three organs, the kidneys, the intestine and the skin. As for the skin, its output is negligible except when made to functionate in an unusual manner, as in very profuse perspiration. Under such circumstances it has been known to yield as much as 0.75 to 1 gm. of nitrogen.

The stools, however, contain an appreciable amount of nitrogen. Some very curious ideas prevail even among physicians about the feces; e. g., that they represent the residue of the food; that the amount depends entirely on *the amount of food ingested*; that if there be no food taken there should be no feces. The stools do not represent the residue of food so long as the food is free from indigestible matter. Stools occur in fasting people and a comparison of these stools with those ordinarily passed shows that there is no difference in their composition or relation of constituents, no matter whether there be much or little food taken, and no matter whether that food be protein, carbohydrate or fat. The amount increases but little with the food and in no sense in proportion to the amount ingested. If excesses of food are eaten, a minimum residue may appear and, of course, cellulose or other indigestible substance is found.

The stools are made up of the residues of the digestive juices, mucus, desquamated epithelium, bacteria, the products of bacterial action, salts and water. Of the salts, it must be remembered that the intestine is the excretory organ for iron and calcium and for the most part of phosphorus and magnesium.

The nitrogen content varies from 1 to 2 gm., but on the whole is so constant that it has been considered as furnishing a definite per cent. of the nitrogen ingested (15 per cent.) without prejudice to the accuracy of the metabolism study.

It is to the urine that we turn, however, to derive important information; for 80 per cent. to 90 per cent. of the nitrogen is excreted by the kidney as urea, uric acid, ammonia, xanthin bases, creatinin and amidobodies.

The study of the total excretion and of its individual constituents is of importance.

TOTAL NITROGEN

It has been invariably found that the amount of nitrogen excreted far exceeds the amount ingested, and so much the more, the more severe the process.

It is common enough to find losses of 8 gm., 12 gm., 16 gm., and more of nitrogen a day; that is, in excess of the intake; and, that, too, when on a diet usually considered satisfactory. This latter figure is the amount of nitrogen demanded in Voit's standard dietary, and if it were interpreted in terms of muscle tissue would mean a loss of a pound of such tissue.

Such figures will be found repeatedly in the tables of Shaffer and Coleman's studies on metabolism in typhoid fever,[7] and those of Wolf and Lambert[8] on pneumonia, to mention some of the most elaborate of the recent investigations.

The study of the total nitrogen and the determination of the "negative nitrogen balance," as it is called, tells us that there has been loss of substance to the body, but it does not tell us what tissues are suffering this loss, nor yet whether the metabolic processes are carried out in a qualitatively normal manner. Such scant information as we have along these lines is derived from the study of the parts that go to make up the total; that is, the nitrogen partition.

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[7] Shaffer and Coleman: Arch. Int. Med., 1909, iv, 538.
[8] Wolf and Lambert: Arch. Int. Med., 1910, v, 406.

It is the small portions that in the past excited but little interest that are now yielding us the most information. One of these portions is the substance creatinin. When Folin[9] published his classical analyses of thirty normal urines, he called attention to the fact that this substance creatinin remained practically constant, no matter what the amount of protein ingested. On this fact he elaborated the theory that this substance was an indicator of "tissue" or "endogenous" metabolism in contradistinction to "intermediate" or "exogenous" metabolism, of which urea is the chief representative. Another representative of this "constant" or "endogenous" metabolism is neutral sulphur,[10] and to a lesser extent, uric acid and ethereal sulphates.

Folin showed that this substance was constant in the individual, but varied in different individuals according to body weight. He spoke of it as an "index to the amount of a certain kind of protein metabolism occurring daily in any given individual,[9] but defined that kind of "protein metabolism" no further.

Shaffer,[11] however, added to our information a little further, by showing that not only was the output of creatinin in an individual constant from day to day, but also from hour to hour, amounting from 7 to 11 mg. of creatinin nitrogen for every kilogram of body weight per twenty-four hours; this he called the "creatinin coefficient." He, moreover, gave reason to believe that the substance was an index, not of total tissue metabolism, as Folin thought, but of one tissue metabolism, that of the *muscle*, as its output seemed to show a parallelism to the muscular efficiency or strength of the individual. It has nothing to do with the muscular work, but rather with the machine, the muscle itself. He suggests that it is an index of muscle tone. If one may use an analogy without too close adherence to details, one might consider the creatinin to represent the friction, the daily wear of the muscle machine, not at all the product of its work.

Here was an important clue to follow up. Any substance that showed the ravages of disease in so important a tissue as muscle was worth looking after. Already studies on the substance in pathologic conditions had assisted to suggest the above view of its significance and further work confirmed it.

It was found that creatinin was diminished in conditions of muscular inefficiency, such as amyotonia congenita, myasthenia gravis, muscular dystrophy,[12] exophthalmic goiter, and in the as yet undeveloped muscles of the infant.[13]

How is it affected by acute infectious fevers?

There is a pretty constant agreement among the investigators that it is increased during the height of the fever and is most marked when the nitrogen loss is the greatest, but there is no numerical relationship between the two. During convalescence and even before, there is a diminution in the excretion which may be attributed to muscular weakness. It must be interpreted in the sense that the febrile condition increases the wear and tear of the muscle tissue. This increase in creatinin was determined for typhoid fever,[14] for pneumonias, for erysipelas—to call attention to some of the most recent work.

So much for increased wear and tear of the protein constituents of the body during the acute infectious process; but is there anything that bespeaks by its presence actual destruction of a definite tissue? There is a substance in the tissue closely allied to creatinin, which differs from it only by the presence of one molecule of H_2O in its structure (creatinin is a dehydration product of creatin), which does not appear normally in the urine, or appears only in traces. This is called creatin.

Creatin is to be found in the urine only in abnormal conditions. It is found in wasting diseases, such as the cachexia of carcinoma, in starvation, and in fevers. It is derived from the muscle and its presence in the urine means destruction of the substance of that structure. It is very striking during the involution of the uterus after childbirth. It was found in all the studies on fevers referred to, and sometimes ran over into convalescence. Its disappearance from the urine is looked on as a good omen, and what interests us as dietitians is that when made to appear in starving animals it has disappeared under a pure carbohydrate diet.

Besides the creatinin, neutral sulphur and uric acid are both increased and may be looked on as further expressions of increased endogenous metabolism.

So far we have considered quantitative changes rather than qualitative in the nitrogen metabolism. Qualitative changes might be taken as evidence of metabolic inefficiency.

Evidence of this is to be looked for in the so-called "rest nitrogen." This "rest nitrogen" or "undetermined nitrogen" is that nitrogen which is left of the total nitrogen when the nitrogen of urea, ammonia, uric acid and creatinin have been subtracted. If the "rest nitrogen" increases it may be considered as being at the expense of the urea, the most important nitrogenous substance, and so indicate a defective desamidation. The amido-bodies are, indeed, the most important of the substances included in the "undetermined nitrogen." There are, besides leucin and tyrosin, indol, skatol, glycocol, proteic acids and albumoses, as well as xanthin bases.

Shaffer and Coleman found but little increase in the "rest nitrogen" in typhoid fever and the same was true of pneumonia investigated by Wolf and Lambert (there was absolute increase, but not in disproportion to total nitrogen). It may be said, then, that as a rule the urea-forming function is but little impaired, an important conclusion in considering the ability of the liver to handle the products of protein digestion.

In grave cases, such as were observed in the study of typhoid metabolism by Ewing and Wolf, the "rest nitrogen" did become high and the urea low.

These authors looked on the phenomenon as indicative of inefficiency of the liver urea formation, recalling the high "rest nitrogen" found in acute yellow atrophy.

Such patients probably suffer from an auto-intoxication in addition to the toxemia of the disease.

A high "rest nitrogen" may occur in the period of convalescence and it is believed by the investigators mentioned that the disturbances arising at times from the administration of meat early in convalescence called "febris carnis," may be due to the inability of the metabolic functions at this time to carry on their work efficiently.

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[9] Folin: Approximately Complete Analysis of Thirty Normal Urines; Laws Governing the Chemical Composition of Urine; A Theory and Protein Metabolism, Am. Jour. Physiol., 1905, xiii, 45, 66, 117.

[10] The importance attributed by Folin to neutral sulphur as an expression of "endogenous" metabolism has more lately been called into question.

[11] Am. Jour. Physiol., 1908, xxiii, 1.

[12] Spriggs: The Excretion of Creatinin and Uric Acid in Some Diseases Involving the Muscles, Quart. Jour. Med., 1907-1908, i, 63.

[13] Amberg and Rowntree: The Excretion of Creatinin in the Infant, Bull. Johns Hopkins Hosp., February, 1910.

[14] Klercber: Ueber Ausscheidung von Kreatin und Kreatinin in fieberhaften Krankheiten, Ztschr. f. klin. Med., 1909, *lxviii*, 22.

Patients may be profoundly toxic, however, without any evidence of hepatic inefficiency as determined by a high "rest nitrogen." It would seem, then, as Ewing and Wolf suggest, that the amount of "rest nitrogen" has prognostic significance.

All this shows that in acute infectious diseases there is a loss to the intrinsic structure of the body and that while such loss is entirely compatible with a perfect urea-forming function—and, indeed, the latter is but rarely impaired even in severe cases—there are yet a certain number of grave cases in which the liver has apparently through grave changes in its structure found itself incapable of desamidation and abnormal metabolic processes are in evidence.

With this knowledge it should be the effort of the therapeutist to prevent this loss and perversion of function, or at least to mitigate them. Can the administration of food accomplish this, and, if so, how shall it be ordered?

It would seem natural to conjecture that if the body was losing 10 gm., 15 gm., or 20 gm. of nitrogen a day over the intake, such a loss could be made good or prevented by increasing the intake of nitrogen to that amount. The truth of the matter is that neither the amount of the loss nor any other amount, without the help of the other foodstuffs, can bring about a nitrogenous *equilibrium in man.*

The recent work of Folin and Chittenden, showing the small amount of nitrogen which is really needed to establish an equilibrium, would lead us rather to use the smallest amount of protein necessary and avoid the breaking down and elimination of the superflous nitrogen radicles, by organs burdened with disease, and increasing the heat to the fevered organism by the "specific dynamic action" of the protein.

Shaffer and Coleman were able to establish nitrogen equilibrium in typhoid fever on from 10 gm. to 15 gm. of nitrogen, when sufficient carbohydrate was used. This amount will be seen to be less than the Voit standard demands, by a considerable margin.

Fat and carbohydrate both spare protein; not, of course, replacing it, for they are both nitrogen-free. Fat spares the combustion of protein to furnish heat; and weight for weight furnishes, as has been shown, over twice as many calories as carbohydrates. The fat of the body is utilized in this manner as a protein-sparer. Emaciation, which bespeaks its disappearance, makes the sufficiency of food intake all the more imperative to prevent destruction of the body protein.

Carbohydrate is a very much more efficient sparer of body protein than fat. Probably much of the demand on protein in the underfed body is for the carbohydrate moiety of its structure. Carbohydrate is imperative to life and must be had at any cost. This the ingested carbohydrate furnishes, so that it both furnishes heat as does the fat, but also subserves other functions which the fat cannot do.

Nitrogen equilibrium has been struck and the subjects kept at from 5 gm. to 8 gm. days and weeks with comfort and apparent health, when enough carbohydrate and fat are taken.

The above statements hold for the protein-sparers in *health.* In acute infections their influence is not so marked quantitatively. Von Noorden says that in experimentally induced pyrexia the protein metabolism is not limited to the same amount in the presence of carbohydrates as when the temperature is normal.

It would seem possible, then, by covering the caloric needs of a resting patient and adding the 25 per cent. increase induced by pyrexia, to keep a patient in nitrogenous equilibrium. In an average man this would mean, as before stated, about 3,000 calories. In practice, however, it is not true; and it was for this very reason that protein loss still continued in acute infections, when the theoretical food-needs had been liberally met, that investigators in general were convinced that this loss was due to destruction of the cell substance by the poisons of the disease—"toxic destruction"—and that no diet could prevent it.

That this loss can be prevented and that such a fact impairs the theory of "toxic destruction," the elaborate observations of Shaffer and Coleman show. They prevented nitrogenous loss and the elimination of creatin and increase of neutral sulphur, which are taken as the expression of cell destruction. They found that from sixty to ninety calories per kilo were needed to effect such a result in typhoid fever. Of this amount forty to fifty or even more calories per kilo must be furnished by carbohydrates. They point out that a loss of 10 gm. of nitrogen or 62.50 gm. of protein can furnish but 250 calories, and have no explanation to offer for the fact that 2,000 calories of carbohydrate are needed to prevent this loss.

It has been proved, then, that in some men suffering from severe acute infectious disease, the usual protein loss can be stayed by the administration of a large quantity of foods; but whether this fact could be wisely used as a basis of procedure in practice is a debatable question.

In this paper I have dealt only with those laws that *constitute the science of dietetics*; the application of these laws to the individual: the appreciation of those factors that make every individual deviate from the type; the adjustment of theory with conditions, constitute the art of dietetics.

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GASTRIC AND DUODENAL ADHESIONS IN THE GALL-BLADDER REGION, AND THEIR DIAGNOSIS BY THE ROENTGEN RAYS *

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Until recent years the Roentgen rays have proved of little or no value in the demonstration of pathologic conditions in the region of the gall-bladder. Even at present the demonstration of gall-stones will depend first on the presence of more or less lime salts in the stones and second on a very careful technic,[1] so that only the positive diagnosis of gall-stones is of value. However, when a cholecystitis is associated with a pericystitis leading to adhesions of the stomach, duodenum or bowel, the effects of such adhesions can be demonstrated. Isolated observations have been made from time to time, but this subject has received careful attention chiefly during the past year. In January, 1910, Schürmayer gave a demonstration of diapositives in Berlin,[2] showing the effects of adhesions of the stomach. During February, 1911, Cole demonstrated the effects of such adhesions on the peristaltic waves of the stomach, cinematographically, but paid little or no attention to the displacement, which I think is far more constant and more important.[3]

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* Read and illustrated with lantern-slides before the Medical Section of the College of Physicians, Philadelphia, March 27, 1911.

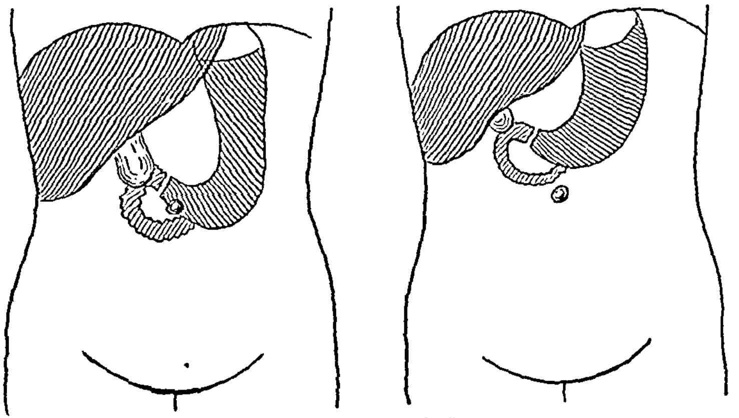
[1] Pfahler: Proc. Am. Roentgen Ray Soc., 1910.

[2] Fortschr. aus dem Gebiet d. Roentgenstrahlen, xv, 6.

Schürmayer based his report on a study of hundreds of cases. He quotes Riedel as saying that the symptoms known as biliary colic in general are due not to gall-stones, but to the pulling of adhesions incident to an inflamed and attached gall-bladder, with which statement Schürmayer is in full accord.

If adhesions in the gall-bladder region have taken place, we have in the Roentgen rays a means of diagnosis which is distinctly more valuable than the direct examination for gall-stones. The recognition of the effects of these adhesions will explain the indefinite symptoms in many of these cases. This recognition depends on a modification of the normal position of the stomach and duodenum.

The *normal stomach* is located in the left side of the abdomen and seldom extends more than an inch beyond the median line in the standing posture. The pylorus is located about an inch above the umbilicus. The lower pole of the ideally normal stomach is on a level with the lower border of the pylorus, but the lower pole of the average healthy adult is distinctly lower, and in gastroptosis may extend to the crest of the pubes.



Figures 1 and 2

Fig. 1.—Stomach in normal position, but the liver and gall-bladder swollen and thereby approaching more closely the stomach and duodenum, and more easily permitting the formation of adhesions to these organs.

Fig. 2.—Liver and gall-bladder returned to their normal position, the stomach and duodenum drawn upward and to the right by adhesions.

In chronic cholelithiasis and cholecystitis the associated swelling of the liver and gall-bladder brings them nearer to the duodenum and stomach. The pericystitis permits and leads to adhesions to these organs. Then when the swelling is reduced spontaneously, or as a result of medicinal treatment, these adhesions pull the stomach and duodenum upward and to the right. It is the recognition of this change of position of these organs which can be made visible, and enables us to definitely make a diagnosis.

In these cases the clinical symptoms appear during that period of digestion when the motor function of the stomach and duodenum are at their height, and especially when these adhesions interfere with the emptying of the gall-bladder, either directly or because the gall-duct has been drawn abnormally high. If the effects of these adhesions are kept clearly in mind it can be understood why symptoms develop in these patients after they have eaten an abnormally large meal, which at least will produce a dragging.

During active peristalsis these adhesions are being pulled on each time that a wave passes, and if there is associated inflammation a constant aching pain is the result. If the inflammation has subsided, then of course, the pain is less, and an increase in the inflammation as a result of errors of diet or other cause will be associated with an exacerbation of the pain.

THE EXAMINATION

In these cases, I first make an examination directly of the gall-bladder region to detect, if possible, the presence of stones, since such an examination is valueless after the stomach examination has been begun.

I then give the usual bismuth mixture (bismuth subcarbonate 1 ounce to a glass of buttermilk). This is carefully observed as it enters the stomach and is carried to the pylorus. Instead of dropping quickly to the lower pole as it does normally and in gastroptosis, it is carried more slowly to the right of the median line and distinctly above the umbilicus. This is observed on the fluoroscopic screen in the standing posture.

Great care must be taken to avoid error. The stomach is ordinarily a very movable organ, therefore, pressure will influence its position very much. On this account the position of the stomach must be studied with varying degrees of pressure, and with all pressure removed. This study is possible only under fluoroscopic examination, which I regret very much, since all who know recognize it as a dangerous procedure. It may be dangerous even under the best protection, but should be entirely avoided if the operator is exposed to any appreciable amount of rays.

The plates are, I believe, equally important, and I always make one or more after I have completed my fluoroscopic work. The plate gives more detail, and permits of less hasty study. On it one can often trace the course of the duodenum when it cannot be followed fluoroscopically. While a plate alone may give a certain amount of information, I believe that it can seldom be depended on alone to determine the position of the stomach. This is especially true when the plate is made with the patient lying on the abdomen, in which the effect of pressure and position almost certainly will lead to error.

The position of the stomach and the duodenum will, of course, vary with the location and the extent of the adhesions. In some cases the pyloric end can be traced directly to the gall-bladder, and makes a picture very similar to that shown in the older text-books as the normal position of the stomach. In this connection, it must be borne in mind that while these old illustrations are accurate, in that they represent the position of the stomach as studied in the anatomic and surgical rooms, in which the subject is lying on the back, they are entirely inaccurate as representing the living subject in his normal upright position.

In some cases the duodenum only is involved by these adhesions and the position of the stomach itself is influenced only secondarily and slightly. The duodenum, however, is drawn out of place, is irregular in shape and there may be some interference with the passage of food.

Schürmayer recommends that in order to eliminate error the knuckles of the index and middle fingers of the left hand be pressed strongly against the duodenum and pylorus and an effort made to hold these parts down while the liver moves upward during expiration. This is a dangerous procedure to the Röntgenologist, and, while it can be done with carefully planned protection, in my experience there has nearly always been too much tenderness to permit of sufficient pressure. Of course when this can be done, it gives valuable confirmatory evidence.

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[3] Address before the Academy of Medicine, New York, Feb. 16, 1911, at which I demonstrated by lantern-slides the effects of adhesions in twenty-six cases.

Conclusions as to the position of the stomach are of no value unless they are based on a full knowledge of the normal position of the stomach and the conditions which influence it, such as pressure, varying degrees of filling, the tonicity of the stomach wall, etc.

In addition to the study of position one should observe carefully the effects of the adhesions on the peristaltic waves. This is best done by a careful fluoroscopic examination. If adhesions involve the stomach wall they are likely to interrupt or modify the peristaltic wave. This interference is most often seen in the wave on the lesser curvature.

At times it is extremely difficult to differentiate between simple adhesions and those due to carcinoma. Usually a more or less characteristic encroachment on the lumen of the stomach will serve to diagnose carcinoma, but at times this is impossible. We should bear in mind the general history and other clinical evidence, and finally we may have to resort to an exploratory operation in order to make the diagnosis.

The material on which this paper is based consists of about thirty cases, most of which show the effects of adhesions incident to gall-bladder disease, others due to tuberculosis, and finally a group due to carcinoma. Most of the patients have been operated on and the diagnosis confirmed. The others I hope to see operated on since this is the only treatment.

CONCLUSIONS

1. Gall-bladder disease is liable to give rise to adhesions.
2. These adhesions cause a definite displacement of the stomach and duodenum which is recognizable by the Roentgen rays.
3. The evidence of adhesions is best obtained fluoroscopically in the upright position, in which the errors of pressure must be eliminated, but plates should also be made in every case for record and for more detailed study.

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A NEW AND APPARENTLY SUCCESSFUL METHOD OF TREATING METABOLIC OSTEO-ARTHRITIS

SO-CALLED ARTHRITIS DEFORMANS

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In the last[1] of a series of papers on the so-called rheumatoid diseases, I briefly outlined a method of treatment for one, the most serious, condition usually included in this group. This method of treatment I have now used for four years, and as it has proved efficacious in nearly all cases, and especially so in those usually considered hopeless, I consider it worthy of detailed description.

The greatest difficulty in judging the results of a given form of treatment in the so-called rheumatoid diseases is due to our extremely indefinite and faulty nomenclature; the majority of the reports of the treatment give only a vague idea of the nature of the disease under treatment; and in by far the majority of instances a number of evidently diverse conditions are treated in exactly the same way. For this reason, as the condition to be discussed here is a distinct pathologic and clinical entity, I must, in order to avoid confusion, briefly recapitulate what was said in the previous papers on the classification of the so-called rheumatoid diseases in general and the diagnosis of metabolic osteoarthritis (so-called arthritis deformans) in particular.

Chronic rheumatism, rheumatoid arthritis, arthritis deformans, osteo-arthritis, and various other less familiar appellations, are used to designate a group of dissimilar diseases, variations of the same disease, entirely distinct conditions, or something involving a joint with which the observer is entirely unfamiliar. No two investigators seem to be able to agree exactly on a clinical or pathologic entity for which one or more of these terms shall be definitely applicable. Under these circumstances, an attempt to acquire a definite understanding of these joint conditions must fail if these names are retained. It is much simpler, and we are much more likely to attain definite results if we ignore all the previous attempts at classification entirely, begin afresh, and consider the joint diseases just as we would those of other organs under similar circumstances, i. e., according to the principles of pathology.

Pathologists divide the diseases of the organs generally into two classes, viz., the *inflammations* and the degenerations. As there is no reason to believe that the mesenchymal tissues of the joints are fundamentally different from those in other organs, there should be no necessity to prove that these mesenchymal tissues react similarly to pathogenic influences. As a matter of fact, the conscientious and enlightened pathologist will find that the pathologic changes are exactly analogous. Hence a discussion of the pathology, which would lead us too far, is omitted.

What is true of the pathology is also true of the clinical phenomena. Indeed, as the joints are superficial and their functions purely mechanical, the local symptoms—pain, loss of motion, muscular atrophy, deformity, etc.—are rarely characteristic of a particular disease. The presence of some or all of these joint symptoms simply indicates that there is joint abnormality, but gives absolutely no clue to the nature of the condition. For this reason, it is quite impossible to formulate a practical or scientific classification of the joint disease with the deformity, the character of the effusion, or any of the other intrinsic joint symptoms as the starting-point. In fact, all the previous attempts to classify the joint diseases have failed just because these symptoms have been used as the basis of differentiation.

In the joint diseases, therefore, even more than in those of the other organs, the fundamental differentiation must depend not on the specific reaction of the affected organ but on the clinical phenomena, induced by the fundamental pathologic condition. As soon as this is appreciated, all the difficulties of classifying the polyarticular joint diseases are practically overcome.

Thus the characteristic symptoms of the inflammations are abrupt onset, more or less constitutional reaction, a definite course with a marked tendency to resolution; those of the degenerations, insidious onset, a gradually progressive course without tendency to a definite termination. And, leaving other considerations aside, it will be found that joint diseases naturally divide themselves into two great classes according to these clinical characteristics. Thus we have, (1) a class of joint diseases which begin more or less acutely, with, usually, a definite onset (rise in temperature, general constitutional disturbance), local signs of inflammation, followed by remissions or intermissions, and a definite termination in complete recovery or permanent but never progressive joint disability; and (2) a group in which the disease comes on insidiously, without acute constitutional reaction, running a gradually progressive course, leading gradually and progressively to joint disability.

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[1] Am. Jour. Med. Sc., June, 1909.

The first are the inflammations; the second are the degenerations.

Just as in the other organs, the inflammations are due to infection or trauma. In the polyarticular infections, the causative microorganism is demonstrable in some cases; so, for instance, in so-called sepsis, gonococcal or pneumococcal infections, etc. In a large number of cases, isolation of the offending microorganism is not attempted, because it is impractical, or fails. But these cases present the same clinical and pathologic phenomena as those in which the microorganism is demonstrable. The fact that the organism is not demonstrable should therefore be no reason for grouping these cases under a separate head.

As a matter of fact, the majority of the advanced clinicians recognize and so classify the polyarticular infections. The misinterpretation of these conditions does not occur so frequently during the acute stage. The confusion arises when such patients are seen after *the acute stage has subsided*. As has been said, one of the cardinal signs of an inflammatory or infectious process is its tendency to run a definite course. This is as true of infections involving joints as it is when other organs are affected. Though the tendency to recover is always present, however, it does not necessarily follow that resolution is perfect. In a great many cases, though the active disease subsides, the patient is left with a varying number of weak or deformed joints. When he attempts to use these weak or deformed joints, he finds it impossible because of the pain or deformity, or both. It is then that he begins his wandering as a subject of chronic rheumatism, rheumatoid arthritis, arthritis deformans, etc. He is sent to springs, massaged, baked, or subjected to various forms of mechanical treatment. If he has only weak joints, he may recover in spite of the treatment. If he has bony ankylosis or limitation of motion from tendon or cicatricial contraction, he does not improve, and he frequently grows worse.

What the majority of investigators and clinicians have failed to appreciate is that such an individual is not suffering from an active disease at all. He has simply the results of a disease. It is therefore useless to attempt to study the pathologic changes or to seek the etiology of the disease in such cases; not only useless but actually harmful to subject these patients to treatment for constitutional disease by internal medication and diet. What these patients need is surgery, intelligently applied. In those cases in which nothing can be done, the recognition of the condition will at least save the patient the additional suffering of the treatment usually proposed.

It is not my object to speak of the treatment of the polyarticular infections in this paper. However, this may be said: in a great many cases much can be done to alleviate suffering, and remedy the disability which results from these conditions. To help such patients, we must, however, be conversant with the joint physiology, mechanics and pathology. One must at least be able to make a diagnosis, i. e., must first of all differentiate active disease from disability, and polyarticular infection or its results from degeneration.

Few indeed seem able to do this. Dissimilar as are the infections and the degenerations, the treatment they receive, from the average practitioner and the orthopedic surgeon alike, is the same in either case; this in spite of the fact that in many cases the failure to differentiate one from the other is disastrous to the patient, and that such differentiation is nearly always a very easy matter.

Though there are other characteristic differences, the most definite differential feature between the degenerative and the inflammatory joint diseases is the course of the disease. In the inflammations, the onset and the course are definite, terminating in recovery or more or less permanent damage. In the degenerations, the onset is insidious, and the course is gradually progressive. The joints gradually become deformed and the deformity and disability gradually increase. In the infections, after the subsidence of the acute attack, whether one or more joints are affected, the disability remains the same, and no more joints are involved unless there is an actual recrudescence of the original infectious process. In the degenerations, not only are the onset and course insidious, but new joints, in which the disease runs the same course, are gradually and progressively involved.

If only these few fundamental differences are appreciated, it seems to me almost impossible to confuse the inflammatory or infectious diseases with the degenerations. *And this accomplished, all the difficulty of classifying the polyarticular joint diseases disappears.* For, with the recognition of the difference between the two fundamental conditions, instead of the unscientific and misleading classification of the joint diseases into several groups, one of which, having a single name or two or three meaningless names, comprises all forms of the infections, degenerations and deformity, we have the natural and scientific division of the joint diseases into two definite classes, with names which at least suggest the clinical and pathologic phenomena.

Moreover, if these two fundamental classes are each subdivided, according to the location of the disease in the joint—arthritis when the soft parts are involved, osteo-arthritis when the articular ends of the bones are involved—we can suggest the clinical and pathologic condition and the location of the disease by a single name. Thus:

1. Inflammation or infections:
   A. Infectious arthritis.
   B. Infectious osteo-arthritis.
2. Degenerations, i. e., trophic diseases:
   A. Trophic arthritis.
   B. Trophic osteo-arthritis.

Within the subgroups we can still more definitely classify the conditions when the etiology is known. With the infections, this is often possible, for the offending organism can often be isolated or recognized by the special clinical phenomena it produces.

When we come to etiologic grouping of the degenerations, however, the task is somewhat more difficult because it is often impossible to determine the underlying cause. We know, for instance, that degenerative joint changes appear as the result of senility (senile arthritis, senile osteo-arthritis) and in the course of certain organic nervous diseases (neurotic osteo-arthritis, tabes, syringomyelia, etc.). These are usually monarticular conditions, and are easily recognized and classified.

In the generalized or polyarticular degenerations, on the other hand, the etiology is unknown in the majority of instances and therefore cannot be specified. In my previous paper I suggested that these be termed "metabolic," which in this instance is intended to designate not a known chemical abnormality but the pronounced general disturbance of the nutrition so characteristic of these conditions; and which, as shown in my last paper[1] is the direct cause of the joint abnormality. By far the majority of cases of the polyarticular degenerations are osteo-arthritides. Metabolic arthritis is a comparatively rare condition. Thus the joint degenerations are grouped as follows:

Degenerative joint diseases:
- A. Trophic arthritis.
    - (1) Metabolic arthritis.
- B. Trophic osteo-arthritis.
    - (1) Senile osteo-arthritis.
    - (2) Neurotic osteo-arthritis.
    - (3) Metabolic osteo-arthritis.

It is with the treatment of metabolic osteo-arthritis that the present communication deals. I briefly describe its principal features. For a complete exposition of the pathology and etiology I must refer the reader to my previous paper.[1]

This is the disease generally called arthritis deformans, or rheumatoid arthritis. Only a few writers, however, have described it as a distinct disease. Bäumler reserved the name "arthritis deformans" for it alone, and Schuchardt described the clinical phenomena more or less accurately and called it "arthritis nodosa." With the exception of a few of the older writers, Adams, Charcot, and Virchow, who at least more or less completely differentiated it, these are the only writers who do not to some extent affiliate the condition with the polyarticular infections or their sequelæ.

Metabolic osteo-arthritis, as the name suggests, is a polyarticular joint degeneration, which involves the articular ends of the bones primarily, and which is due to a disturbance of the nutrition. The condition, being due to a general anomaly, is invariably polyarticular and the joint involvement is nearly always symmetrical. It attacks the peripheral joints first, and a number of joints are usually affected simultaneously. The onset is invariably insidious. Not only is the onset insidious, but in cases uncomplicated by mechanical irritation the course is gradually progressive. In some cases, it is true, the disease advances more rapidly than in others, but even in the most malignant forms the disease advances gradually, and there is never an abrupt onset with acute local and general reaction. In the majority of cases the disease progresses slowly and gradually. Gradually increasing weakness (called stiffness by patients), and passive motion limited only by the muscular contraction are the more characteristic joint symptoms. Joint swelling may be entirely absent throughout the course of the disease. As far as my experience goes, the swelling from effusion, when present, is nearly always due to a mechanical irritation (i. e., the use of the affected parts); and the nodular swelling, said to be characteristic, is purely suggestive, being most often due to the atrophy of the periarticular structures which make the articular ends of the bones appear more prominent. Pain is also most variable, though in some it is very severe, in others it is slight or entirely absent.

Preceded by more or less decided subjective symptoms —pain, formication, feeling of weakness, etc.—a number of peripheral joints (fingers, toes, wrists, ankles) gradually become weak, or, as the patient says, stiff. This weakness or stiffness gradually increases and, with or without pain or swelling, is followed by deformation. The deformity, which, as I showed in my previous paper,[1] is due to muscular contraction during the early stages and bone absorption in the later stages, gradually increases; and though passive motion is not entirely limited, the deformity gradually and progressively leads to crippling. In the meantime, other joints become involved in the same insidious and progressive manner, and in the severer cases, beginning in the periphery and proceeding toward the trunk, all the joints, including those of the spine, may become involved. Though there are never true intermissions, even in the severer forms of the disease, there are times when the disease progresses less rapidly or apparently remains stationary for a variable length of time. The periods of quiescence may even continue for a number of months, or, in rare cases, a year or more; but in the severer forms the disease ultimately resumes its relentless course and the individual finally becomes a helpless cripple. In the milder cases, the disease advances very slowly, and though ultimately a number of joints becomes involved, years may elapse before there is marked disability.

The differential diagnosis should occasion no difficulty. With one exception (polyarticular form of senile osteo-arthritis—Heberden's nodes), there is no other form of polyarticular osteo-arthritis in which the joints are symmetrically or progressively involved. As has been said, metabolic osteo-arthritis is usually confused with the polyarticular infections or the deformity resulting therefrom. The history of the case—acute onset, a definite course, the irregularity of the joint involvement, and the inertia after the general condition has subsided—as compared with the insidious onset, symmetrical joint-involvement, and progressive character of metabolic osteo-arthritis, should make the diagnosis easy.

In many of the cases, moreover, the character of the joint changes is significant. In the infections, the condition being inflammatory, there are, when there is not complete recovery, adhesions in arthritis, and bone ankylosis or bony outgrowths, limiting both active and passive motion in osteo-arthritis; in metabolic osteo-arthritis, passive motion is limited only by tendon contraction. But, as has been said, one should never make the diagnosis from the intrinsic joint symptoms alone, for though complete ankylosis or marked limitation of motion is a fairly sure sign that we are *not* dealing with metabolic osteo-arthritis, the fact that there is deformity and free joint motion does not absolutely signify that we are dealing with it. Though this is rather unusual, the polyarticular infections sometimes leave nothing behind but short tendons or a certain amount of capsular thickening or bony outgrowth, which may not limit the motion to any great extent. When, however, we have passive motion limited by tendon contraction or deformity alone, and a history of an insidious onset, more or less symmetrical involvement, and a gradual progressive course, the diagnosis is unmistakable. Even when there is a more or less continuous fever, say 100 to 101 F. (rectal), or occasional signs of joint irritation (i. e., effusion and pain), these signs are absolutely pathognomonic.

Besides these definite clinical phenomena, we have still another aid to diagnosis in the radiograph. Good radiographs, particularly of the smaller joints of the extremities, show very characteristic pictures. Even before there is deformity, they show a characteristic rarefaction of the anterior ends of the bones. At this time, the rarefaction is confined to small circumscribed areas in the epiphyses, just beneath the bone cartilage. As the disease advances, the areas become gradually larger and larger, and in the smaller joints of the very severe cases the articular ends of the bones may finally become completely absorbed. The rarefaction of metabolic osteo-arthritis, as shown by radiography, differs radically from that of infectious osteo-arthritis. In the latter, the rarefaction is extreme and diffuse, often extending to the shaft in the smaller bones at the very beginning; and when recovery is not complete there is nearly always bony outgrowth and at times complete bony ankylosis. The differentiation of the monarticular forms need not concern us here.

With such definite clinical signs, and the radiograph as an adjunct, it seems almost impossible to mistake metabolic osteo-arthritis, or to confuse or affiliate it with any other condition. It is with treatment of this condition, and this condition only, that the present communication is concerned.

In my paper on metabolic osteo-arthritis[1] it was shown that while metabolic osteo-arthritis is a definite and perfectly characteristic joint condition, both clinically and pathologically, the general conditions with which it is associated vary within wide limits. In some cases there are absolutely no definite general symptoms at all; in others, they are sometimes characteristic of one general anomaly, and sometimes of another. Moreover, it was shown that the perfectly typical symptom-complex appears in the course of diseases of an evidently dissimilar character—for instance, Basedow's disease, chronic pulmonary tuberculosis, congenital syphilis, etc. At first sight, such a condition of affairs would lead us to doubt the propriety of considering the joint diseases as a definite clinical entity; but it was further shown that these diseases and conditions, no matter how exceedingly they may differ otherwise, have at least one thing in common, i. e., a gradually (varying from an apparently insignificant to a very definite) deterioration of the general nutrition. And, as it was found that the peculiar form of degeneration which is characteristic of metabolic osteo-arthritis is exactly what, theoretically, we would expect such a nutritive anomaly to induce, it was concluded that metabolic osteo-arthritis is not due directly to the organic or constitutional conditions with which it is associated, but to the disturbance of the nutrition caused by them.

After reaching this conclusion some years ago, I decided that the only way to attack the problem of the treatment of this condition was either to find some means of removing the cause of the nutritional disturbance, or, as the cause of it in the majority of cases, being unknown, cannot be removed, to find some way of improving the general nutrition empirically.

In order to succeed in this, however, it was first necessary to discard all the previous methods of treatment in their entirety. If the joint condition is due to a deterioration of the nutrition, the usual diet and the internal administration of iodids and so-called antirheumatic remedies, by disturbing digestion, etc., are harmful. I, therefore, discarded all these procedures, all medicines, and permitted the patients who were still able to be about to use a nutritious mixed diet—as much to eat as they could digest, and even a moderate amount of alcohol to those accustomed to it.

I then, in order still further to improve the nutrition, experimented with various forms of special foods—olive oil, fatty foods, excess of starch, etc.—without apparently making any impression on the joint disease. The nutritious diet led to some improvement of the general condition, and the pain, when present, was somewhat relieved by rest, but the condition remained otherwise the same, or in many cases continued to progress.

About four years ago, led by Basch's experiments, demonstrating the influence of the removal of the thymus on the growth of the skeleton, I began the use of the dried thymus gland in metabolic osteo-arthritis. My first attempts in this direction were not encouraging. I found no immediate benefit from small doses, and had it not been for some conscientious patients who lived at a distance and continued to take the gland for a long time I should probably have discontinued its use. But thanks to these, I found that the continuous administration of thymus extract sooner or later led to definite and, in some cases, striking improvement. The pain and joint disability do not immediately disappear as soon as it is administered; on the contrary, the intense pain which is characteristic of some of these cases may persist for weeks, unabated, while thymus is being taken. It is only when the thymus is continued for months, despite the discouraging outlook, that the general nutrition begins to improve, and only with this improvement does the joint disability gradually disappear. That this improvement in the condition is due to the thymus I have been able to demonstrate in some of my patients, for in them the symptoms reappeared after the thymus was discontinued.

Nor must it be expected that thymus alone will bring about complete recovery. In the early stages, and in the mild slowly progressive cases, before muscular contraction and deformity have appeared, the disease will be arrested if all other treatment and joint irritation of other kinds are discontinued.

In the severer cases, the use of the diseased joints or the methods of treatment—massage or other mechanical measures—have usually already led to joint irritation when the patient comes under treatment. It must be remembered that the cardinal principle of putting all diseased joints at rest is equally important in metabolic osteo-arthritis as in other joint diseases. The doctrine advanced by many writers, namely, that rest is dangerous in so-called arthritis deformans because it leads to stiff joints, has done almost as much harm as has the disease itself. Indeed, I am convinced that a large proportion of the individuals suffering from this condition would never have been so completely disabled had they been left to themselves rather than submitted to the mechanical procedures ordinarily employed.

It is true, however, that as the disease advances slowly and is never nearly so active as in the inflammations, it is rarely necessary to immobilize the joints completely. Splinting is rarely necessary, but patients with active disease should not engage in manual work, and they should not be about when the disease is active in the lower extremities.

A short period of rest in conjunction with thymus and a nutritive diet will nearly always relieve the more active symptoms in the milder cases. The period of rest must, however, be prolonged in the severer ones. In the severer forms, particularly those of patients who have had the more active treatment, it requires months, or as long as a year, to bring the condition to quiescence.

When all signs of active disease have disappeared for some time, and no more joints have become involved, i. e., when the disease has become quiescent, and only then, more active treatment should begin. This more active treatment consists, at first, solely in the very gradual return to function. The patient is allowed on his feet, or to use his hands for a short time, and gradually, when there is no return of the signs of the active disease, the periods are increased. Those who have not had the disease in a severe form must, as a rule, be restrained from overtaxing themselves. On the other hand, in the severe cases, that is, in those of the patients who have been bedridden for a long time, it is usually no easy task to bring about locomotion. The patients are nervous and timid, and only after much encouragement and the reiterated assurance that they can walk if they try, can they be induced to make the effort. Here tact in handling chronic invalids plays an important rôle. I am quite certain, and the results I have obtained bear me out, that even in those bedridden for a long time (several years) persistence and intelligent effort will ultimately lead to surprisingly good results.

Moreover, in the long-standing cases and in those of the very severe forms of the disease, there is always more or less muscular and tendon contraction, which, in the majority of the cases, remains after the disease has become quiescent. In the upper extremities, these contractures, with the exception of those affecting the fingers, which are difficult to remove or overcome, do not interfere with function to any great extent. But in the lower extremities, deformities, when they exist, must be corrected, if locomotion is to be perfectly reestablished. It is difficult to say exactly when this should be done, but if the patient is able to get around fairly well in spite of the deformity, I consider it better to wait until it is quite certain that the disease is quiescent before I proceed to corrective measures.

In the lower extremity, flexion and adduction of the hip, flexion of the knee and equinovalgus of the foot are the more common deformities. These are easily corrected. But it must be remembered that epiphyseal ends of the bones are soft and friable, and any attempt to correct the deformity by force will not only be unsuccessful, but will often increase instead of diminish the disability. I have, indeed, seen two cases in which attempts at forcible correction of flexion of the knee resulted in fracture above and below the knee-joint—an irreparable injury.

If under profound anesthesia the deformity resists gentle manipulation, tenotomy, which is harmless and in skilful hands is always successful, should be resorted to. Cutting the adductors is all that is necessary to correct the adduction and flexion of the hip in the majority of cases. Only in the very severe cases of long-standing disease will there be coxa vara, which prevents correction of the adduction deformity, and which can only be obviated by osteotomy.

Flexion at the knee is a very common deformity. In a few cases I have seen it disappear without operation. In a large number of cases, gentle manipulation, at either one or two sittings, will correct it. In the long-standing cases, tenotomy of the hamstrings will be necessary. In some cases the valgus deformity is difficult to correct without tenotomy of the heel-cord.

As soon as the joint irritation which, to some extent, always follows these operative procedures has subsided, the patient, with the limb held in the corrected position by plaster of Paris or other means, is encouraged to be about. Some require only a few days, and only a few require more than two weeks of rest in bed. The bandages are retained for about a month, with variations either way to suit the individual case. As soon as they are removed, active and passive motion is begun, very gently at first, and very gradually increased. There is some pain at first, and the extent to which the efforts to regain active and passive motion should be pushed is a matter of judgment. Any attempt to increase the arc of motion should immediately cease on the advent of joint irritation (effusion and severe pain). Rest and renewed attempts, repeated time and again, will finally result in practically complete return of both active and passive motion.

It must be apparent that the treatment here advocated not only takes considerable time but requires good judgment and the most careful attention to detail if it is to be successful. Patience, tact and a careful study of each individual case are absolutely necessary.

There is absolutely no necessity for restricting the diet. Patients in bed must of course receive more easily digested food than those about; but all that is required, in the vast majority of cases, is a nutritious mixed diet. I allow a small quantity of alcohol in suitable cases, and I have never yet seen harm come of it. Digestion is unimpaired in the majority of these patients, and in many of them the bowels move naturally. In the bedridden and sedentary patients there is, of course, a tendency to constipation, but this is usually relieved by mild laxatives. I have seen absolutely no indication for drastic eliminative treatment, and I have seen no case of true metabolic osteo-arthritis in which such measures were not harmful.

It must again be emphasized that the cause of metabolic osteo-arthritis is not uniform, and that the treatment must always be adapted to the general conditions which may exist. He who is the most careful observer and possessed of the rare talent for taking pains will be most successful.

That the treatment, when properly carried out, is successful, is proved by records of my own cases which here follow:

I have records of 186 cases which were under observation for three months or longer. I have not considered the hospital and dispensary patients, or the cases in which the results could not be verified. Of these 186, 103 cases were seen early, and though the diagnosis was made to my own satisfaction and the results excellent in the majority of them, for fear that there should be any question as to the large percentage of good results, I leave these out of consideration. We then have left eighty-three severe cases; all of the patients were in good circumstances and had been unsuccessfully treated by the usual methods, and all of them, under ordinary circumstances, were doomed to hopeless crippledom.

Of these eighty-three patients, eighteen were bedridden and were considered hopeless by the numerous medical men who had seen and treated them. Fourteen were more or less helpless, and were for the most part being wheeled in chairs, etc., and almost all were entirely incapacitated from walking. The remaining fifty-one showed decided deformation but could walk with more or less difficulty and pain.

Of the eighteen bedridden patients, eight are now walking without cane or crutch, and have no pain. Three are walking with a cane and are gradually discarding it; two are walking with crutches, and will gradually discard these when the deformities of the lower extremity are corrected; two, though still in bed, are beginning active and passive motion. Three died of an intercurrent or the underlying pathologic conditions. Of the fourteen wheel-chair patients: the results unknown in four; three are walking without assistance of any kind; two are walking with a cane; two, joints quiescent; three died.

Of the remaining fifty-one, practically all improved under treatment. As many of these patients live at a long distance from the city, they were very difficult to trace. Thus, eleven of these, all doing well while still under observation, could not be traced and the final result is therefore unknown. Of the remainder, thirty-three patients, all of whom had decided signs of metabolic osteo-arthritis—deformation, pain, difficulty in walking and using the hands, with frequent periods of more or less complete disability—are and have been for a year or more practically well. Of these, fourteen are men who, for periods varying from six months to two years, were unable to attend business, but are now actively engaged at their former occupations. In only seven patients, three of whom did not properly carry out the treatment, has the treatment proved unsuccessful.

These results in a disease which was considered hopeless, speak for themselves. Moreover, it must be remembered that these results were obtained in patients who had been treated by the usual methods and continued to grow worse up to the time they came under observation.

I have always used a certain brand of thymus extract, giving from two to four tabloids of 5 grains each three times a day, either before or after meals. I suppose that put up by any reliable therapeutical house would be suitable; but that put up by beef-packers is practically inert.

How the thymus acts on the joints I do not pretend to know, nor do I believe it a specific. What is certain —and I think that my results prove this—is that when the thymus is conscientiously taken for a long time and the patient is otherwise judiciously handled, marked improvement, if not perfect cure, can always be expected.

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ABDOMINAL PAIN AND TENDERNESS, MUSCULAR RIGIDITY AND PSEUDOPERFORATIVE OR PSEUDOPERITONITIC SYMPTOMS IN THORACIC DISEASE—PNEUMONIA AND PERICARDITIS

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For a long time we have known that in thoracic affections such as pneumonia and pleurisy, pain may be reflected from the chest to the abdomen, thereby simulating abdominal disease. (Andral, 1836; Watson, 1871; Fagge and others.) In discussions of this not infrequent occurrence, attention has been directed chiefly to the pain alone, and it has been stated that such abdominal reference of pain of thoracic origin may be differentiated directly by the absence, in thoracic disease, of abdominal tenderness and other intrinsically abdominal findings.

The object of this paper is to establish clearly the existence of deep abdominal tenderness, muscular rigidity, collapse and the Hippocratic abdominal symptoms of rupture and peritonitis in purely thoracic affections.

CASE REPORTS

Case 1.—Case of right lower lobe pneumonia, in which abdominal pain, tenderness, rigidity and retraction, in association with collapse, precisely simulated perforative peritonitis; in which operation disclosed no abdominal abnormality, and in which the appropriate findings of fibrinous pneumonia appeared.

History.—In June, 1907, a man aged 32, entered the hospital in partial collapse, having been taken ill some four hours earlier with severe pain in the lower abdomen. The temperature was 101 F., the pulse 106 and small, and the respirations 22. The skin was grayish, particularly about the mouth, and the expression indicated intense anxiety and suffering. The thoracic examination was negative. The abdomen was considerably retracted on both sides and above, as well as below. Palpation elicited marked tenderness, more on deep than on superficial pressure, particularly below the umbilicus. The least movement, as turning the patient on his side to test for free fluid and to explore the posterior chest, gravely accentuated the abdominal distress. The rectal and urinary examinations were negative and the white count was 17,000. In the entire absence of any previous abdominal or other history, the shock and abdominal picture was interpreted as perforation and peritonitis and the only speculation concerned the origin of the perforation. The examining surgeons and physicians coincided in the indication for immediate laparotomy, which was performed by Dr. E. Wyllis Andrews. The peritoneum, appendix, stomach, bowel and gall-bladder were explored carefully, but with completely negative results. In just twenty-four hours after admission the fever rose to 103 F. and the breathing to 26 to 28; the pulse remained stationary, a catching but unproductive cough appeared and crepitant râles were determined over the right lower lobe, and in twelve hours more, dulness and bronchial breathing. In five days from the onset, a typical crisis ensued.

Case 2.—Case of pericarditis with effusion, pain and tenderness over the entire abdomen, muscular defense, abdominal retraction and later left upper-lobe pneumonia.

History.—In June, 1907, a boy, aged 14, of robust appearance and high color entered the hospital, complaining of languor, headache and anorexia. His previous history was negative, save for measles, whooping-cough and varicella, early in life. Abdominal distress appeared after two days of low fever (99.8 to 101.2 F.), a pulse-rate of 100 to 115 and normal breathing rate (18 to 20). The abdomen was equally sensitive to superficial and deep palpation, its walls were generally retracted, it did not participate in the respiratory movements and the patient lay quiet because movement increased his abdominal pain, as by the efforts of urination, defecation, etc.

The tongue, chest, glands, urine, etc., were negative and the white count showed 15,400 leukocytes. It seemed perfectly clear that there was peritonitis from some cause. This patient immediately followed the one first described; four other patients admitted to the surgical service and operated on under the erroneous diagnosis of peritonitis or appendicitis developed pneumonia and these experiences excited an unusual reserve, both among the surgical and medical staffs. Another day later a typical to-and-fro pericarditic friction was noted and effusion gradually gave the typical pyriform precordial dulness, buried the heart tones and masked the apical and cardiac pulsations. As the effusion appeared, all abdominal symptoms remitted. The fever rose to 101 to 103 F., the pulse to 120 and the breathing to 30 to 36. One week after admission crepitant râles, dulness, bronchial breathing, increased vocal fremitus and bronchophony developed over the left upper apex, chiefly behind, which findings seemed pneumonic rather than from pressure by the pericardial exudate, although the latter interpretation was considered. In ten days after admission, convalescence was established by a slow crisis.

SYMPTOMS

To me the particular interest of these cases consists in the initial severe and diffuse abdominal symptoms. This pseudoperitonitic or pseudoperforative symptom-complex is remarkable in two ways: (1) that no thoracic symptoms of any kind coexisted with the symptoms of onset; and (2) that the abdominal symptoms in their completeness left no doubt, in the opinion of all observers, as to the existence of peritonitis or perforation.

Systematic treatises on pneumonia and pleurisy, particularly in pediatrics, give due mention of pain referred to the abdomen, thereby simulating acute abdominal inflammation, and many special articles have considered these conditions. It is usually and properly stated that differentiation is possible, by noting that tenderness is absent over the subjectively painful abdominal area and that thoracic examination or respiratory symptoms give some clue to the nature of the affection. Indeed, the clinician customarily, in instances of abdominal pain, halts till he can exclude the triad of confusions—tabetic crises, respiratory infections and vertebral disease.

The *pain* is variously depicted. Some, as Henoch, speak of it as superficial only, yet Raillet describes the pain as deep and over McBurney's point. Dieulafoy has found that pain in appendicitis does not begin with full intensity, as it does in perforation, e. g., of a gastric ulcer, but this dictum certainly does not always hold. Melchior[1] places special differential reliance on the contrast between the slight local findings and the severe general symptoms, as the sharp pain, the high fever, the involvement of the sensorium, involuntary evacuations, etc.; he cites the analogous early appendix symptoms of typhoid as an example. It is held that pain and other abdominal symptoms of this pseudoperitonitic group cease suddenly and characteristically, which is considered differential from appendicitis. Against this statement, a strong protest must be made, inasmuch as every clinician has learned to dread the sudden treacherous improvement witnessed in appendicitis, when gangrene or rupture relieves the tension of the part involved.

Tenderness and *rigidity* are frequently described. It may be local or general. Richardson[2] speaks of rigidity and universal tenderness. Arron finds that the muscular defense is less than in perityphlitis. Mignon found generalized abdominal rigidity, and Barnard's[3] patient exhibited almost spasmodically hard abdominal muscles. Melchior's patient exhibited tension of the abdominal walls. In my experience moderate abdominal tension is common in pneumonia.

Immobility in bed is also described by Mirande. In Griffith's[4] and Richardson's[2] reports the knees were drawn up.

Collapse is seldom described. In Martens'[5] three pneumonias, the symptoms at first resembled perforation, but operation was suspended till the pneumonic signs cleared the diagnosis. In Barnard's[6] report, the patient collapsed on the street; epigastric rigidity, pain and tenderness, the rapid thready pulse, and a history of gastric ulcer led to operation which revealed neither ulcer nor peritonitis; the autopsy disclosed bilateral lower-lobe pneumonia. Barnard comments on the relaxation of the abdominal walls between respirations, which was lacking in our cases.

The general symptoms generally in some way suggest a general infection or respiratory localization. The significance of fever, higher than is usual in appendicitis, is emphasized by Griffith, Barnard, Richardson and Sprengel. The gray color (*teint plombé*) of the skin in appendicitis is important, in Kirmisson's opinion. Anxiety is especially remarked in one of Griffith's patients and in my first one. Headache, severe cerebral toxemia, chills, cough, rate and character of the breathing are important. Obstinate constipation is not uncommon, and initial vomiting, especially in children, or even renewed emesis, may be confusing.

Confusions arise not merely in pleurisy, empyema and lower-lobe pneumonias, but also in bronchopneumonia, upper-lobe hepatization (Bennecke[7] and Herrick[8]) and, as in my second case, pericarditis with effusion.

In conclusion, it is not my object to canvass the entire literature of this subject or to claim that the clinical picture described is wholly unique, since doubtless many have experienced the same situation. It is proper, however, to insist on the following points:

1. Pneumonia, pleurisy and pericarditis, at their very onset, may present absolutely no symptoms other than the abdominal findings.
2. These phenomena of invasion may completely resemble appendicitis, peritonitis of other etiology, or even the collapse of perforation.
3. Diagnostic errors and unnecessary operations may be unavoidable. Immediate operation is imperative and the small percentage of error is negligible in comparison with the benefits of early operation in genuine indications (particularly as 80 per cent. of patients operated on under a mistaken diagnosis, recover).
4. The tenderness does not always remit with deep, flat pressure, and that relaxation of the abdominal parietes, between respirations, is not invariable.
5. The general symptoms do not invariably overshadow the local, the latter at times being the more salient.[9]

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[1] Melchior, Edward:. Mitt. a. d. Grenzgeb. d. Med. u. Chir., xxi, part 3, article xxiii, p. 469.

[2] Richardson: Boston Med. and Surg. Jour., 1902.

[3] Barnard: Lancet, London, Aug. 2, 1902, p. 280.

[4] Griffith, J. P. Crozier: Reports of Interesting Cases, Containing an Article on Peritonitic Pneumonia, Arch. Pediat., June, 1899, p. 418; Pneumonia and Pleurisy in Early Life Simulating Appendicitis, THE JOURNAL A. M. A., Aug. 29, 1903, p. 531.

[5] Martens: Med. Clin., 1908, No. 49, p. 1857.

[6] Lancet, Aug. 2, 1902, p. 280.

[7] Bennecke: Med. Klin., 1909, No. 7.

[8] Herrick: THE JOURNAL A. M. A., Aug. 29, 1903.

[9] Aside from the references mentioned in the text, the following may be referred to:
Hampeln: Ztsch. f. klin. Med., xlv, 1902.
Kuttner: Beitr. z. Chem. Phys. u. Path., 1906, li.
Lowett-Morse: Ann. Gynec. and Pediat., November, 1899.
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THE HISTORICAL COLLECTION OF MEDICAL CLASSICS IN THE LIBRARY OF THE SURGEON-GENERAL'S OFFICE *

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In any library of size the problem of what to do with its rarer and costlier books is usually solved by stowing them either in or out of sight, in show-cases, drawers, cupboards and coffers, and in the Surgeon-General's Library at Washington this policy has been in force for some years so far as its incunabula, elephantines, erotica and curiosa are concerned.

The recent plan of the librarian, Col. Walter D. McCaw, to put the more important medical classics under glass, for purposes of safe keeping, has resulted in a collection of unique interest and value, for the nation's medical library is singularly rich in these literary treasures, the accumulation of which is mainly due to the untiring zeal and vigilance of Dr. Billings and Dr. Fletcher in the past. The fact that nearly every volume in this exhibit is a first edition should interest the medical bibliophile, and at the same time an arrangement of the classics in strictly chronological order affords a bird's eye view of the textual history of medicine to the student and casual visitor, while giving the specialist chapter and verse, as it were, by enabling him to put his finger on the particular *locus classicus* in each case. Then, many of these old medical classics are fine specimens of typography in themselves, bearing on title-page or colophon the stately names of the great printers of the past.

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In preparing this chronological exhibit, which will, when completed, be provided with a suitable *catalogue raisonné*, it was thought best that the historical collection proper should begin with Greek medicine, for the reason that, apart from the works of the Jewish and Arabian physicians in the Middle Ages, Oriental medicine has mainly an anthropologic or esoteric interest. The leading monuments of pre-Hippocratic medicine, including the Ebers Papyrus, the Code Hamurabi, the Charaka Samhita and the Suruta, are, of course, on exhibition in the library hall, and no one will challenge the importance of these documents. From the hieratic writings of the papyri we get a clear idea of the priest-like dignity of the ancient physician's calling, the various diseases and the extensive materia medica known to the ancient Egyptians. From the Code Hamurabi we sense the importance attached to physicians' fees even 2,200 years before Christ. From the Suruta, the great storehouse of Aryan surgery, we learn that to their lofty Brahminical code of ethics the ancient Hindu physicians united a highly specialized knowledge of operative procedure and of surgical instrumentation that was not improved on by the Greeks and Romans who came after them. Aryan skill in surgery has been an unbroken tradition, even through the Dark Ages, when surgery was most under a ban. But with this single exception and in the face of the researches of savants like Ebers, Joachim, von Oefele, Jolly, Preuss and Bartels, it is doubtful whether the records of Egyptian, Indian, Chinese, Mesopotamian and Babylonian medicine can be ranked with the classic texts. Cuneiform, hieroglyphic, runic and palm-leaf inscriptions all point to one fact, that ancient medicine and the medicine of primitive peoples, whether Accadian or Scandinavian, Slavic or Celtic, Roman or Polynesian, has been the same throughout space and time—in each case an affair of charms and spells, plant lore and psychotherapy, to stave off the effect of supernatural agencies. It may interest us vastly to know that the āaā disease of the Egyptian papyri was identical with hookworm infection; that the Chinese had a pulse-lore and practiced acupuncture; that Finsen's red-light treatment of small-pox was known to ancient Japanese physicians as it was to John of Gaddesden; that an early Persian manuscript pictures a permanent gastric fistula like Alexis St. Martin's; that Machaon and Podalirius were the first naval surgeons, and so forth. Yet these are after all only waifs and estrays of information, and as information is not knowledge, so disconnected facts do not make a scientific record. Such a record implies not only the isolation and collation of facts, but their interpretation and the induction of the general laws behind them, and, in this sense, pre-Hippocratic medicine has not the slightest claim to be called scientific. Few will dissent, therefore, from the wise (if somewhat Olympian) view of Goethe that Eastern antiquities have only a casual interest: "Chinesische, indische, ägyptische Alterthümer sind immer nur Curiositäten."

I. THE GREEK AND GRÆCO-ROMAN PERIOD (460 B. C.-476 A. D.)

European medicine began in the age of Pericles and its scientific advancement centers in the figure of Hippocrates (460 to 370 B. C.), who crystallized the loose knowledge of the Coan and Cnidian schools into systematic science, dissociated medicine from theurgy and philosophy, and developed the art of grouping and coordinating symptoms so that the clinical picture of a disease began to emerge of itself as a definite entity.

The Surgeon-General's Library possesses an unusually rich collection of some 900 volumes relating to the Hippocratic Canon, including fifty-two different editions of the *Opera Omnia*, 441 separate treatises, and 408 commentaries and critical compendiums. Of these, the following are on exhibition:

1. The folio Latin text of the *Opera Omnia*, translated and edited by Fabius Calvus, the friend and patron of Raphael, and published at Rome under the auspices of Pope Clement VII in 1525. This was the first complete edition of Hippocrates to be printed.
2. The folio *editio princeps* of the Greek text, published the following year (1526) by Aldus at Venice.
3. The Basel *Opera Omnia* edited by Janus Cornarius and printed by Froben (1538), highly prized on account of its textual and critical accuracy.
4. The Greek text and Latin translation of Hieronymus Mercurialis, printed by the house of Giunta at Venice in 1588.
5. The Frankfort edition of 1595, containing the valuable translation and commentary of Anutius Foesius, the most learned, industrious and able of the Hippocratic commentators before the time of Littré.
6. The first Latin text of the aphorisms, edited by François Rabelais (Lyons, 1532).
7. The tiny Leyden editions of the aphorisms (1607 and 1628), the first a Plantin imprint, the second a vest-pocket Elzevir.

The greatest scientific name after Hippocrates is that of "the master of those who know," the Asclepiad Aristotle (384 to 322 B. C.), who gave to medicine the beginnings of zoölogy, comparative anatomy and embryology and the use of formal logic as an instrument of precision. A worthy successor of the Stagirite was his friend and pupil Theophrastus of Eresos (370 to 286 B. C.), also a physician and called the "protobotanist," because he did for the vegetable kingdom what Hippocrates had previously done for surgery and clinical medicine, by collating the loose plant-lore of the woodmen and "rhizotomi" into a systematic treatise. The "De Historia Plantarum" of Theophrastus, the foundation-stone of European botany, is represented by the Aldine Greek text of 1497 and the Greek and Latin text of Stapel (Amsterdam, 1644).

The colonization of Greek medicine in Egypt led to brilliant developments in anatomy and surgery, but our knowledge of the two great Alexandrian anatomists, Herophilus and Erasistratus, the originators of dissecting, is not based on any textual record of their writings, but was pieced together by the scholarship of Marx and Hieronymus. The principal relics of the empirical poison-lore of the second century B. C. are the two hexameter poems of Nikander on poisonous animals ("Theriaca") and plants ("Alexipharmaca") which have been preserved in the two Aldines of 1499 and 1523, and the French versification of these poems by Jacques Grevin (Plantin imprint, Antwerp, 1568).

After the destruction of Corinth (146 B. C.), Greek medicine may be said to have migrated to Rome. Before the Greek invasion, the Romans, as the younger Pliny tells us, "got on for 600 years without doctors," relying mainly on medicinal herbs and domestic simples, superstitious rites and religious observances. The proud Roman citizen, who had a household god for nearly every physiologic function, looked askance on the itinerant Greek physician, despising him as a mercenary for accepting compensation for his services and otherwise distrusting him as a possible poisoner or assassin. Apart from the writings of a private litterateur like Celsus, the principal Roman contribution to medicine was the splendid sanitary engineering of the architect

Vitruvius. Greek medicine was finally established on a respectable footing in Rome through the personality, tact and superior ability of Asclepiades of Bithyna (124 B. C.) whose fragments are presented in Gumpert's Greek text (Weimar, 1794).

Although Roman medicine was almost entirely in Greek hands, the best account of it that we have was the work of Aurelius Cornelius Celsus, a private gentleman who lived during the reign of Augustus Cæsar, and wrote encyclopedic treatises on medicine and other subjects for the benefit of the Admirable Crichtons of his day. To moderns, Celsus is the leading authority on Græco-Roman medicine and Alexandrian surgery. Under the Romans military and gladiatorial surgery attained a degree of perfection which the general art was not to reach again before the time of Ambroise Paré. Celsus is also the standard authority for the weights and measures used by the Romans, and the *Proœmium* of his "De Re Medica" contains the first history of medicine. Of the 105 different editions of Celsus, the Surgeon-General's Library possesses sixty-five. The show-case exhibit includes the Florentine *editio princeps* of 1478, the Milan imprint of 1481, the rare Giunta of 1524, the Aldine of 1525 and the handsome Elzevir of 1657.

Pedacius Dioscorides, a Cicilian Greek, was an army surgeon during the reign of Nero (*circa* 64 A.D.) and utilized his opportunities of travel in the study of plants. His work is the authoritative source on the materia medica of antiquity, of which he describes about 600 plants and plant-principles, over a hundred more than Theophrastus. Up to the beginning of the seventeenth century, the best books on medical botany were still simply commentaries on the treatise of Dioscorides, which is preserved as the Aldine of 1499 (Greek text), the Stephanus of 1516 (Latin text), the rare bilingual text of Cologne, 1529, and the Italian commentary of Mattioli (Venice, 1544), also excessively rare.

Aretæus the Cappadocian, who also lived in the reign of Nero, comes nearer than any other Greek to the spirit and method of Hippocrates and is on this account more readily appreciated by modern men. As a clinician, he ranks next to the Father of Medicine for the graphic accuracy and fidelity of his pictures of disease, of which he has given the classical, first-hand accounts of pneumonia, asthma, diabetes, leprosy, diphtheria (ulcera Syriaca) and the first clear differentiation between cerebral and spinal paralysis. His work is preserved in the faulty Greek text of 1554 and in Wigan's valued Clarendon Press edition (Oxford, 1723).

Another great eclectic was Rufus of Ephesus, who lived in the reign of Trajan (98 to 117 A. D.), and whose literary remains and fragments have been preserved in the Paris text of 1554.

Soranus of Ephesus, a methodist of the second century, A. D., is our leading authority on the gynecology, obstetrics and pediatrics of antiquity. His treatise on midwifery and diseases of women, represented by Dietz's Greek text (Königsberg, 1838), was the original of such famous books as Röslin's "Rosegarten" (1513) and Raynalde's "Byrthe of Mankynde" (1545), and most of the supposed innovations in these books, such as the obstetric chair or podalic version, have been traced back to Soranus. After Soranus, there were no real additions to obstetrics before the time of Paré, some 1,500 years later.

The ancient period closes with the name of the greatest Greek physician after Hippocrates—Galen (131 to 201), the founder of experimental medicine. Galen's youth and old age were those of a peripatetic. His life was one long *Wanderjahr.* This roving disposition undoubtedly did much to develop that cocksure attitude of mind which made his writings the fountain-head of ready-made theory, or what the Germans call "polypragmatism." He had an answer ready for every problem, a reason to assign for every phenomenon. How the followers of Galen imposed his authority on European medicine for ages is one of the commonplaces of medical history. Up to the time of Vesalius, European medicine was one vast *argumentum ad hominem* in which everything relating to disease and its treatment was referred back to Galen as a final authority, from whom there could be no appeal. After his death European medicine remained at a dead level for nearly fourteen centuries. Galen's true greatness lies in the simple fact that he gave to medicine that method of putting questions to Nature and arranging matters so that Nature may answer them which we call experiment. His experiments on the physiology of the nervous and respiratory systems are truly classical and the only thing of the kind before Harvey. Of Galen's *Opera Omnia,* the Surgeon-General's Library possesses the ten different Giunta editions, selected volumes of which are on exhibition, together with the Aldine of 1526, Linacre's translations of the "De Sanitate Tuenda" (Paris, 1517), and "De Temperamentis" (1527); and the Simon Colinaeus imprint of the "De Usu Partium" (Paris, 1528), the prototype of all subsequent "Bridgewater treatises."

II. THE BYZANTINE PERIOD (476 TO 732 A. D.)

The solitary thing the Eastern Empire did for European medicine was to preserve something of the language, culture and literary texts of Greece. Although the Byzantine power lasted over a thousand years (395 to 1453 A. D.), medical history is concerned only with the names of four remarkable men who were prominent physicians in the first three centuries of its existence. Of these the courtier Oribasius (326 to 403 A. D.), a friend and physician-in-ordinary to Julian the Apostate and sometime quæstor of Constantinople, is chiefly remarkable as a torch-bearer of knowledge rather than as an original writer, but his compilations are highly valued by scholars in that he always gives his authorities and, so far as is known, quotes them exactly. Medicine is indebted to him for a remarkable anthology of the works of his predecessors, many of whom (the great surgeon Antyllus, for instance) might otherwise have been lost to posterity. A representative work of Oribasius is the epitome of medicine which he made for the use of his son ("Synopseos ad Eusthasium Filium"), of which a rare large paper Aldine (Venice, 1554) is exhibited; but the student of medical history will read Oribasius to best advantage in Daremberg's splendid six-volume edition, with the French translation (Paris, 1851-1876).

Aetius of Amida, who lived in the sixth century A. D., was also a royal physician and *comes obsequii* at the court of Byzantium. His work, represented in the Aldine of 1534, is principally remarkable for the introduction of such far-Eastern drugs as cloves and camphor into the pharmacopeia.

Alexander of Tralles (525-605), who is regarded by many historians as the most remarkable of the Byzantine compilers on account of the originality of his therapeutic procedure, is represented by the Lyons *editio princeps* of his "Practica" (1504).

Paul of Ægina (625-690), the last of the Greek eclectics and compilers, is represented by the Aldine Greek text of 1528. We may judge how low medicine had sunk at this time by his apologetic statements in regard to any lack of originality on his part. He frankly admits that the ancients have said all that could be said about medicine and that he is only a humble scribe. Paul was, however, a very capable surgeon and the seventh book of his "Epitome" was the standard work on the subject up to the time of Albucasis.

III. THE MOHAMMEDAN AND JEWISH PERIODS (732-1096 A. D.)

By the swords of Mohammed and his emirs the wild outlaw clans of the Asian and African deserts were converted into nations capable of acting as military and social units, but it was not until long after his death when the mighty empire which he founded was subdivided into caliphates, that the sciences and arts were permitted to develop. We call the medical authors of the Mohammedan period "Arabic" on account of the language in which they wrote, but in reality most of them were Persian- or Spanish-born, and many of them were Jewish. The leading physicians of the Eastern (or Bagdad) Caliphate were the three Persians, Rhazes, Haly Abbas and Avicenna.

Rhazes (860-932), a great clinician, ranks with Hippocrates, Aretæus and Sydenham as one of the original portrayers of disease. His descriptions of small-pox and measles is the first authentic account in literature, a classic text. It is preserved in the original Arabic, with parallel Latin translation, in Channing's edition (London, 1766). Rhazes' great encyclopedia, the "El Hawi" or "Continens," which Haller preferred to any other Arabic treatise, is shown in the Latin translation of Feragus (Brescia, 1486).

Haly ben Abbas, a Persian mage, who died in 994, was the author of the "Almaleki" or "Liber Regius," a text-book which was the canonical treatise on medicine for a hundred years, when it was superseded by the "Canon" of Avicenna. It has never been printed in the original Arabic, but is preserved in the Latin translations of 1492 and 1523.

Avicenna (980-1036), called "the Prince of Physicians," a convivial Omarian spirit, eminently successful in practice as court physician and vizier to different caliphs, was one who trod the primrose path at ease and died in the prime of life from the effect of its pleasures. The "Canon" of Avicenna, a huge, unwieldy storehouse of knowledge, which Haller styled a *methodica inanitas*, but which was none the less a great medical text in its day, is preserved in the original Arabic text (Rome, 1593) and in the Latin texts of 1479, 1483 and 1486. The Giunta edition of 1608 contains some striking plates which show that Avicenna knew and practiced the method of treating spinal deformities by forcible reduction which was reintroduced by Calot in 1896. The collection of pharmacologic treatises by the eponymous or pseudonymous Mesue junior is of interest as one of the earliest known incunabula (Venice, 1471).

The leading medical authors of the Western or Cordovan Caliphate were the surgeon Albucasis and the Jewish physicians Avenzoar and Moses Maimonides. Albucasis, a native of Cordova, who died there in 1106, was the author of a great medico-chirurgical treatise called the "Altasrif" (or "Collection"), of which the surgical part is exhibited in Channing's Arabic text (Oxford, Clarendon Press, 1778). It is remarkable as containing the first pictorial representations of surgical instruments and was the leading text-book on surgery in the Middle Ages up to the time of Saliceto. The greatest of the Jewish physicians during the Arabic period was the Cordovan Avenzoar, who died in 1161. He was one of the few men of his time who had courage enough to tilt against Galenism and by his description of the itch-mite (*Acarus scabia*) he may be accounted the first parasitologist. His "Teisir," or "Rectification of Health" is preserved in the Latin translation of 1490. The Rabbi Moses ben Maimon, called Moses Maimonides (1139-1208), was court-physician to Saladin, and his "Tractatus de Regimine Sanitatis" was written for that Sultan's personal use. The copy on exhibition, the Florentine imprint of 1478, is one of the rarest of books.

IV. THE MEDIEVAL PERIOD (1096-1438)

Medieval medicine began in the School of Salernum, which was founded by the Benedictine Monks in the ninth century, and survives in its principal document, the "Regimen Sanitatis," written in hexameter verse (1840), and in the "Antidotarium" of Nicolaus Præpositus, the first formulary and one of the first medical books to be printed (Venice, 1741). The principal outcome of the School of Salernum was the work of two surgeons, Roger and Roland of Parma, who, as Allbutt says, "stand like twin brethren in the dawn of modern medicine, bearing the very names of romance." Roger's "Practica," written in 1180 and reedited by Roland, is preserved in the library collection as a rare and interesting manuscript of the fourteenth century, together with Daremberg's classical edition of the "Glossulæ Quatri Magistrorum," vilely printed, "on gray paper with blunt type" (Naples, 1854). Roger, Roland and the Four Masters were succeeded by Hugh of Lucca, who left no record of his work behind him, and his disciple Teodorico Borgognini (1205-96), whose treatise is preserved in the surgical anthology of Articella (*editio princeps*, Venice, 1490). Hugh and Theodoric contradicted the pseudo-Galenist dogma of "coction" or "laudable pus" and stand out in their day as pioneers of a rational asepsis. The ablest Italian surgeon of the thirteenth century was Guglielmo Salicetti, called Saliceto, a man well educated in hospital and on the battlefield, as well as in respect of university training. His "Cyrurgia," exhibited in the *editio princeps* of 1476, stands out as a great landmark or seamark in the history of the craft, to be followed by the "Chirurgia magna" of his pupil Lanfranchi of Milan (*editio princeps*, Venice, 1490). Lanfranc, also a university man, was driven by banishment to Paris, where he became the founder of French surgery and made a resolute and valiant stand against the medieval schism between surgery and medicine. The effect of the work of these great surgeons, coincident with the development of the medieval universities—Bologna (1110), Montpellier (1137), Paris (1176), Oxford (1200), Padua (1222)—and the brilliant false dawn of culture and liberalism in the thirteenth century, did much to further the growth of surgical talent in France, England and Flanders. The "Cirurgia" of Pietro Argelata (Venice, 1480), the reproductions of the text of Henri de Mondeville by Pagel (Berlin, 1892) and Nicaise (Paris, 1893), the "Cirogia" of Guy de Chauliac, written in the *lingua franca* (Venice, 1480), a rare and curiously illustrated fourteenth century manuscript of John of Arderne, and the facsimile of the "Chirurgie" of Jean Yperman (1295-1351) by Carolus (Ghent, 1854), are the principal landmarks of the period.

Hand in hand with the medieval development of surgery, there necessarily went some effort to improve the status of human anatomy. Dissecting, at first rigorously proscribed by law and sentiment, became more and more a matter of course, following the decree of Emperor Frederick II in 1240. Payne had divided medieval anatomic teaching into three periods: First, the Salernitan (from the ninth to the twelfth century), in which instruction was based on the dissection of animals as set forth in the "Anatomia Porci" of Copho, one of the Jewish instructors at Salerno. Second, the Arabist period (thirteenth century), in which such dissections were superseded by books and lectures. The leading authorities of this time were Richard, canon of Wendover, called Richardus Anglicus (1252), whose work is preserved in Töply's text (Vienna, 1902); and Henri de Mondeville, who, long before Ambroise Paré, prefixed an anatomic treatise to his surgery, and who improved on Wendover's teaching by the use of pictures, diagrams and a model of the skeleton. The interest of the third period centers in the revival of human dissecting by Mondino de' Luzzi, called Mundinus (1250-1325), whose "Anathomia" is exhibited in the Leipsic edition of Dr. Melerstat (1493). This little horn-book of Mundinus, although full of Galenical errors in regard to the structure of the human frame, was yet the sole text-book on anatomy for over a hundred years.

Internal medicine during the Middle Ages was essentially scholastic and monastic; that is, its votaries were either monks or schoolmen of the type of the great intellectual leaders of the thirteenth century—Roger Bacon, Thomas Aquinas, Duns Scotus and Albertus Magnus. The medieval logicians did good service in sharpening men's minds and teaching them how to use dialectics as an instrument or weapon, but science itself could not advance so long as the pitfalls of syllogism were preferred to inductive demonstration of fact. The medieval writers on practice of medicine are commonly described as Arabists on account of their unswerving fidelity to Galenical dogma as transmuted through Mohammedan sources. Characteristic Arabist texts are the "Liber Aggregationis" of Jacopo de Dondis (1298-1358), the earliest known of medical incunabula, printed at Strasburg, *circa* 1470 by Adolf Rusch (the "R" printer); the "Conciliator Differentiarum" (Venice, 1476) of the heretic Peter of Abano (1250-1315), the "Breviary of Practice" (Pavia, 1488) of Arnold of Villanova (1235-1312), and the "Lilium Medicinæ" of Bernard de Gordon (Venice, 1496), also exhibited in a rare manuscript of 1349. Nowise classical, these works are typical of the Middle Ages in scholastic subtlety and rigid adherence to dogma. Two books of this group are of special interest to English-speaking people—the "Compendium Medicinæ" (London, 1510) of Gilbertus Anglicus, the leading spirit of Anglo-Norman medicine, and the "Rosa Anglica" (Pavia, 1492) of John of Gaddesden, a prebendary of St. Paul's, whom some think the original of Chaucer's Doctor of Physic. The former is remarkable for its account of leprosy and as containing the first reference to the contagiousness of small-pox. The latter has a remarkable reference to the red-light or Finsen treatment of the same disease, but is otherwise a farrago of Arabist quackeries and countryside superstitions.

V. THE PERIOD OF THE RENAISSANCE, THE REVIVAL OF LEARNING AND THE REFORMATION (1438-1600)

In the transition of civilized mankind from medieval to modern conditions many forces were operative, but undoubtedly the most potent were the invention of gunpowder, which gave the *coup de grâce* to feudalism, and the discovery of printing, the greatest agent in uplifting mankind by self-education. The effect of the revival of Greek culture by the Byzantine scholars who poured into the Italian peninsula after the fall of Constantinople (1453) was to substitute the spontaneous receptive attitude of Plato and Hippocrates for the dialectics and logic-chopping of Aristotle and the Galenists. Prime movers in this change for medicine were the great printers of the Renaissance and the so-called medical humanists. The printing houses of the Aldi and Giunti in Venice, Stephanus and Colinæus in Paris, Herbst (Oporinus) and Froben in Basle, Wynkyn de Worde and Wyer in London, Plantin at Antwerp, Elzevir in Leyden, vied with each other in the issue of stately folios and beautiful texts, while such editors and translators as Niccolo Leoniceno at Ferrara; Rabelais at Meudon, Gunther of Andernach at Strasburg, Hagenbut (Cornarus) at Marburg, and Anutius Foesius at Metz did for Hippocrates what Linacre and Caius in England did for Galen. Linacre's translations of Galen in particular made it clear to physicians of the day that for centuries the profession had relied on garbled and second-hand versions of their favorite author.

Some time after the invention of printing, Germany entered the field of medicine with a remarkable array of semi-popular treatises, most of them written, contrary to custom, in the vernacular, the language of the people. The earliest of the German incunabula on exhibition is the "Regiment der jungen Kinder" of Bartholomæus Metlinger[1] (Augsburg, 1473), a little book on infant hygiene which would be the first Renaissance contribution to pediatrics were it not preceded by Paolo Bagellardo's "De Ægritudinibus Infantum" (Padua, 1472). The "Artzneibuch" of Ortolff of Bavaria (Nuremburg, 1477) was an important German text of popular medicine in its day, and followed, about 1500, by Ortolff's quaint little "Frauenbuchlein," or popular hand-book for lying-in women. A few years later (in 1513), there appeared at Worms the "Rosegarten" of Eucharius Röslin, a work which bears the same relation to Renaissance obstetrics that the "Anathomia" of Mundinus did to medieval anatomy. Although mainly a compilation from Soranus of Ephesus as filtered through the manuscript codices of Moschion, it was still the only text-book in the field after a lapse of fourteen centuries. Three first editions were issued simultaneously, all extremely interesting for their quaint cuts (already faintly outlined in the Moschion codices), for the *réchauffé* of podalic version as originally described by Soranus and for the fact that Röslin's text was miserably plagiarized by Walther Reiff[2] in 1545, and also translated and reissued by William Raynalde as "The Byrthe of Mankynde" (London 1545). The ordinance issued by the city of Ratisbon in 1555 for the direction of midwives ("Regensburger Hebammenbuch") has been proved by Mr. Felix Neumann[3] to be the earliest public document of this kind in the vernacular.

The foundations of medical jurisprudence were laid in its earliest European text, the "Caroline Criminal Constitutions" (*Peinliche Gerichtsordnung*) issued by Emperor Charles V in 1533 and exhibited in Schmid's Middle-High German text (1835). Interesting relics of the great medieval pandemics of syphilis and bubonic plague are preserved in the curious tracts of Widman (1497), Conrad Schelling (1502), Grünpeck (1503), Ulrich von Hütten (1514) and Schmaus (1518). Early German botany survives in the wood-engravings of the "Hortus Sanitatis" (1491) and the herb-books of Brunfels (1530) and Bock or "Tragus" (1539); early German surgery begins with Haeser's reproduction of the "Bündth-Ertzeney" (1460) of Heinrich von Pfolspeundt, which contains the first reference to gunshot-wounds as "powder-burns"; the "Buch der Cirurgia" of Hieronymus Brunschwig (Strasburg, 1497) and the Fieldbook of Military Surgery by Hans von Gersdorff (Strasburg, 1517), both containing some of the most instructive pictures of early surgical procedure in existence, the latter including unique plates of diseases like leprosy and St. Anthony's fire. The same thing is true of the Οφθαλμῶδουλεια, *das ist, Augendienst* of the court oculist Georg Bartisch (Dresden, 1583), the striking illustrations of which give us a complete purview of Renaissance eye surgery. The earliest work in this field was the "De Oculis, Eorumque Egritudinibus et Curis" of Benvenuto Grassi (Ferrara, 1475), and in the vernacular group may be mentioned the little eye book of Walter Bailey (London, 1586) and the "Traité des Maladies de l'Œil" by Jacques Guillemeau (Paris, 1585).

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[1] An earlier German incunabulum is the Hochenburg "Regimen Sanitatis," printed at Augsburg in 1472. (See Sudhoff's "Deutsche Medizinische Inkunabeln," Leipsic, 1908, p. 8.

[2] The plagiarist Reiff should not be confused with the Swiss obstetrician Jacob Rueff (1500-58), author of the "Trostbüchle" (Zürich, 1554), a midwifery of sterling character.

[3] Arch. f. Gesch. d Med., Leipsic, 1911, v.

The effect of these vernacular writings was to get men's minds away from scholasticism and turn them toward realities. This Renaissance tendency reached its highest development in the earliest of the medical leaders of the sixteenth century, Paracelsus, Vesalius and Paré—three strong men of aggressive temperament, who by shouldering past other men, literally "blazed the way," not only for the general advance of medicine, but for keen and liberal thinking in all its branches.

Aureolus Paracelsus (1493-1541), the founder of chemical pharmacology and therapeutics, was neither the refined, supersubtle mystic of Browning's poem, nor yet the roystering, lying, tippling blackguard and quacksalver of tradition. His influence was far-reaching and his real services were great. Far in advance of his time, he discarded Galenism and taught men to accept chemistry as a science; he attacked witchcraft and the strolling mountebanks who butchered the body in lieu of surgical procedure, and he did away with the silly uromancy and uroscopy; almost the only asepsist between Mondeville and Lister, he taught that Nature (the "natural balsam") and not officious meddling heals wounds; he introduced mineral baths and was the first to analyze them; he made mercury, opium, arsenic, antimony and lead a part of the pharmacopeia, and discovered zinc; his "doctrine of signatures" survives in the essence of homeopathy; and in comparing the action of the "arcana" or intrinsic principles of drugs to a spark he grasped the idea of catalytic action. As a theorist, he believed in the descent of living organisms from the *Urschleim* or primordial ooze, and some credit him with anticipating Darwin in his observation that the strong war down and prey on the weak—a fact, unfortunately, within the range of any beggar or footman. But none of these things can outweigh the influence which Paracelsus exerted on his time through his personality. In an age when heresy often meant death, he wasted no time in breaking butterflies on wheels, but drove full tilt at many a superstition, risking his neck with the recklessness of a border reiver. The importance attached to his name may be gathered from the line in Shakespeare's comedy which brackets it with that of Galen[4]. Paracelsus was great in respect of his own time. He does not seem particularly great in relation to our time.

The works of Paracelsus on exhibition are his manual introducing the use of mercurials in syphilis (Frankfurt, 1553), the treatise "De Gradibus" (Basel, 1568), which contains most of his innovations in chemical therapeutics, and his monographs on miners' diseases ("Von der Bergsucht," Dilingen, 1567) and mineral baths (Basel, 1576), the former one of the few original contributions of his time to internal medicine. In this connection we should mention Baillou's account of whooping-cough (1578) and the original description of the syndrome "mountain sickness" by the Jesuit traveler Joseph d' Acosta (1590)[6].

After the time of Mundinus, there appeared a number of anatomic treatises containing the first rude attempts at pictorial representation of dissected parts. These are the so-called "graphic incunabula" of anatomy, of which appropriate woodcuts from Ketham (Venice, 1493), Peyligk (Leipsic, 1499), Hundt (Leipsic, 1501), Friesen (Strasburg, 1519), Berengario Carpi (Bologna, 1521, 1522), and Dryander (Marburg, 1537) are displayed. These tentative efforts at representation, rare and curious as they are, pale almost into obscurity beside the cartoons, *écorchés* and chalk drawings of the great artists of the period—Luca Signorelli and his pupil Michael Angelo, Raphael and Leonardo da Vinci. Of chief interest are the reproductions of Leonardo's red-chalk drawings from the Ambrosian Library at Milan and the Royal Library at Windsor. Startlingly modern in their accuracy and display of physiologic knowledge, these impromptu sketches, made beside the dissected subject, reveal such acquaintance with muscular anatomy as was possible only to the Greek sculptors, and fully justify William Hunter's claim that their author was "the greatest anatomist of his epoch." The marginal notes, which Leonardo has recorded in mirror-writing lest others appropriate his ideas on the physiology of locomotion, reveal the cautious, secretive spirit of the time. The exhibit of pre-Vesalian anatomy includes, of course, the *editio princeps* of Albert Dürer's treatise on human symmetry (Nuremberg, 1532).

Thoroughly as the great artists of the Renaissance may have studied external anatomy, yet dissecting for teaching purposes was still hampered by the theologic idea of the sanctity of the human body as the image of Godhead and the anatomy of the schools was the anatomy of Galen. How far such teaching had progressed may be gathered from the quaint cut on the title-page of the Melerstat Mundinus (1493), in which the scholastic instructor in long robe and barretta, wand in hand, gravely expounds Galen by the book from his pulpit-chair, while below the long-haired barber-servant makes a desperate shift at demonstrating the viscera of the subject before him. The Faust who was to release the science from these trammels and revive the doctrine of the *visum et repertum* was Andreas Vesalius (1514-64), the most commanding figure in European medicine after Galen and before Harvey. There were plenty of dissectors and dissections before Vesalius, but he alone made anatomy what it is to-day—a living, working science. It was the effect of his strong and engaging personality that made dissecting not only viable but respectable. His career is one of the most romantic in the history of medicine. Flemish born, but of German extraction, a pupil of the ardent and bigoted Galenist, Jacobus Sylvius, Vesalius, in his graduating thesis, showed at first the conventional tendencies of the scholiast, but his mind was too active, his spirit too keen and independent, to feed long on the dust of ages, and he soon established a reputation for first-hand knowledge of the dissected human body, even teaching himself the difficult art, so essential to surgeon and gynecologist, of recognizing the palpable structures by an educated sense of touch. Five years' experience as public prosector at Padua, where he made students dissect and inspect the parts *in situ*, culminated in the magnificent "De Fabrica Humani Corporis" (1543), a work which marks an epoch in breaking with the past and throwing overboard Galenical tradition. The effect of a publication so radical on a superstitious and forelock-pulling age was immediate and self-evident. Sylvius, his old teacher, turned against his brilliant pupil with acrimony and coarse abuse, while his own pupil Columbus, an intellectual upstart, sought to cast discredit and derision on him by sharp practice. Others were inclined to "damn with faint praise" or joined in a conspiracy of silence, and, as a last straw, he was subjected to subterranean persecution at the instance of authority. Those things were not without their effect on Vesalius. His portrait suggests a doughty, swarthy, shaggy, full-blooded nature, like some of Lucas Cranach's worthies—a man ready to give no odds and take none, so long as his opponents confronted him in the open; but nowise intended for the spiritual rôle of a martyr. In a fit of indignation he burned his manuscripts, left Padua and accepted the lucrative post of court physician to Emperor Charles V. He married, settled down, became a courtier, and gave up anatomy so completely that, during the long tedious years in Madrid, "he could not get hold of so much as a dried skull, let alone the chance of making a dissection." He paid the penalty of *il gran rifiuto*, when his favorite pupil, Gabriele Falloppio, came to the front as a worthy successor and rumor began to make it clear that he himself was fast becoming the shadow of a great name—

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[4] In All's Well that Ends Well, Act II, Sc. 3, where Lafeu refers to the king's case as incurable, "to be relinquished of the artists," and Parolles replies: "So I say, both of Galen and Paracelsus"—meaning, of course, that neither the Galenical nor the alchemical school of physicians could help him in any way.

[6] d'Acosta, Joseph: Historia natural y moral de las Indias, Sevilla, 1590.

> "Vesalius, who's Vesalius? This Fallopius
> It is who dragged the Galen-idol down."

On receiving the Fallopian "Observationes Anatomicæ" in 1561, all the aspirations of his youth revived, if we may trust his own burning, enthusiastic words, language which fully justifies the implications of Edith Wharton's poem:

> "At least
> I repossess my past, am once again
> No courtier med'cining the whims of kings
> In muffled palace-chambers, but the free
> Friendless Vesalius, with his back against the wall,
> And all the world against him."

In the year 1563, Vesalius set out on a pilgrimage to Jerusalem, as a penance, some say, for an accidental human vivisection, more probably, others think, as a pretext for getting away from his tiresome surroundings. On his way back in 1564, he received word of an invitation to resume his old chair at Padua, just vacated by the death of Fallopius. But his highest wish, to "once more be able to study that true Bible, as we count it, of the human body and of the nature of man," was not to be realized. The sudden access of an obscure malady left Vesalius to die, solitary and unfriended, on the island of Zante.

The exhibit of Vesalius includes his graduating dissertation, the "Paraphrasis" (Basel, 1537); Sir William Sterling Maxwell's facsimile reprint of the "Tabulæ Anatomicæ Sex" (Venice, 1538); the "Epitome" (Basel, 1542), an advance specimen abstract of the "Fabrica," remarkable for the plates representing two handsome specimens of the human race, usually ascribed to Titian; finally the "Fabrica" itself (1543), a superb example of the beautiful typography of his friend Oporinus at Basel, sumptuously illustrated by Titian's pupil, Johan von Calcar. While written in Latin, the "Fabrica" is truly vernacular in the sweeping scorn and violence of its language in dealing with Galenical or other superstitions. Although it completely disposes of Galen's osteology for all time, and indeed recreates the whole gross anatomy of the human body, it has never been translated.

The heretic Servetus (1509-53), whom Calvin caused to be burned at the stake for a mere juggling of verbiage, a theological quibble, was one of the great martyrs for "the crime of honest thought." The discoverer of the *vraie vérité* about the pulmonary circulation, he ranks with Ramon y Cajal as a leader of Spanish medicine. The discovery is recorded in his book "The Restitutio Christianismi" (1553), the foundation stone of Unitarianism, of the original of which only three copies are known to exist. The rare Nuremberg reprint of 1790 on exhibition is probably the only copy in the United States.

The exhibit of anatomic works contemporaneous with Vesalius includes the "Isagoge" (1555) of his teacher Sylvius, to whom the discovery of the Sylvian aqueduct and fissure have been wrongly ascribed, but who discovered the valves in the veins before Fabricius and did good work in the obscure province of descriptive nomenclature; the treatises of Fallopius (1561), Varolius (1573), Vidius (1611), and Eustachius (1714), whose names have been eponymically preserved in the structures they discovered; the monographs "De Formatu Fœtu" (1600) and "De Venarum Ostiolis" (1603) by Harvey's teacher, Fabricius ab Aquapendente; and the examples of French and Spanish anatomic illustration by Stephanus (1546) and Valverde (1556).

The effect of Vesalius on Renaissance surgery is seen in the life-work of Ambroise Paré (1510-90), who made the "Fabrica" popular and accessible to surgeons by writing an epitome of it in the vernacular. Paré's greatest contribution to surgery hinges on the baneful effect which the Hippocratic aphorism that "diseases not curable by iron are curable by fire" exerted on the treatment of gunshot wounds, the new feature of Renaissance surgery. Giovanni di Vigo, physician to Pope Julius II, had taught in his "Practica" (1514), that such wounds were poisoned burns and therefore should be treated with a first dressing of boiling oil. How Paré's supply of boiling oil gave out one night in camp and how he profited by the experience to the extent of letting well enough alone in future is well known. Had it not been for his "fat of puppy-dogs," a lard or salve, which, from some tenacity of superstitition, he continued to apply, he would have been a true asepsist. As it is, his relation to the healing power of nature is summed up in the famous inscription on his statue "Je le pansay, Dieu le guarit." Paré invented many new surgical instruments, made amputation what it is to-day by reintroducing the ligature which had fallen into abeyance since the time of Celsus; was the first to popularize the use of the truss in hernia and described fracture of the neck of the femur. In obstetrics, it was his description and use of podalic version that made the procedure viable and practicable. In dentistry, he introduced reimplantation of the teeth, and his little treatise on medical jurisprudence (1575) was the first work of consequence on the subject prior to the "Methodus Testificandi" of Codronchi (1597).

Paré is represented by his essay on podalic version (1550), his treatise on gunshot wounds (1552), the first edition of his collective works (1575) and his discourse on the mummy and the unicorn (1582), which successfully disposed of an ancient therapeutic superstition.

In connection with Paré, let mention be made of the works of his predecessors, Marianus Sanctus Barolitanus, who gave the original account of the "Marian operation" or median lithotomy (1535); the Provençal surgeon Pierre Franco, who (1561) rehabilitated the operations for hernia, lateral lithotomy and cataract, which had previously been in the hands of strolling mountebanks or hereditary in certain families, like the Collots and Brancas; the "Practica" (Basel, 1563) of the Swiss surgeon Felix Würtz, a follower of Paracelsus in the simple treatment of wounds; Rousset's treatise on Cesarean section (1581) and Tagliacozzi's revival of rhinoplasty (1597). Wilhelm Fabry of Hilden (1560-1634), whose statue was unveiled last year in his native town, is usually regarded as the father of German surgery. He was a bold and resourceful operator and is fairly represented by his treatise on gangrene (Cologne, 1593), a condition for which he was the first to recommend amputation above the diseased part.

At a respectful distance from the great Renaissance pathbreakers may be grouped the works of a quartette of original thinkers—Benivieni (1502), Cornaro (1467-1566), Fracastoro (1484-1553) and Valerius Cordus (1515-54). The "De Abditis" of the distinguished Florentine Antonio Benivieni (Giunta edition, 1507), has been described by Malgaigne as "the only work on pathology which owes nothing to any one," and as far as mere priority goes its author may be regarded (Sir Clifford Allbutt thinks) as a founder of pathology before Morgagni. Luigi Cornaro's "Trattato della vita sobria" (first edition, Padua, 1558) is probably the best treatise on personal hygiene and the "simple life" in existence. Girolamo Fracastro, the kindly Veronese, who practiced in the Lago di Gardo region, was at once a physician, poet, geologist, astronomer and pathologic theorist, and shares with Leonardo de Vinci the honor of being the *first geologist to see fossil remains in the true light.* He was also the first scientist to refer to the magnetic poles of the earth (1530). His medical fame rests on that most celebrated of medical poems, "Syphilis sive Morbus Gallicus" (Venice, 1530), which gave the disease its present name[7], and his treatise "De Contagione" (1546), in which he states with wonderful clairvoyance, the modern theory of infection by microorganisms (*seminaria contagionum*).

Valerius Cordus, the gifted Prussian youth, whose early death robbed science of one of its most promising names, is known to medicine for his discovery of sulphuric ether (*oleum dulce vitrioli*) in 1540; but botanists revere him as the young Marcellus of their science. Greene styles him "the inventor of phytography" and points out that the field-work and taxonomy of a well-equipped modern botanist were actually done "almost four centuries ago by a German boy in his teens."[8] His posthumous commentary on Dioscorides, edited with pious hand by Conrad Gesner, not only describes some 500 new species of plants, the ardent search for which eventually cost him his life, but recreates the species listed by Dioscordides in terms of modern botany. The "Dispensatorium" of Cordus is of interest as the first real pharmacopeia to be published (Nuremberg, 1546).

A striking feature of Renaissance medicine was the publication of a large number of encyclopedic treatises by many authors, not unlike the "up-to-date" works written on the cooperative plan in our own time. Of these we may mention the Aldine "Medici Antiqui Omnes" (1547), the "Medicæ Artis Principes" of Stephanus (1567), the Venetian anthology on mineral waters ("De Balneis," 1553), the Gesner collection of surgical treatises (Zürich, 1555), the Basel encyclopedias of gynecology (1566, 1586) and the medical dictionary of Stephanus (1567).

No account of sixteenth-century medicine would be complete without a passing reference to "The Metamorphosis of Ajax" (1596) of Sir John Harington (1561-1612), the witty graceless godson of Queen Elizabeth, who was banished from her court for writing it. The work introduces an important and indispensable improvement in sanitary engineering, but our author's treatment of his theme is entirely in the manner of Aristophanes, Rabelais or the Zähdarm epitaph in "Sartor Resartus." Those who can read the garrulous whimsical old knight as they would the writers of Elizabethan comedy will smile over his facetious pages.

Army Medical Museum.

REPORT OF A CASE OF TRAUMATIC RUPTURE OF THE UMBILICAL CORD WITHIN THE ABDOMINAL WALL AT BIRTH; RECOVERY

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This case is reported with the hope that it will prove of interest on account of its rarity revealed by a search through the literature. The fact, also, that there was an uneventful, uncomplicated recovery, though death from hemorrhage or shock might be expected, is worthy of notice.

Labor was normal; presentation right occipito-anterior. As the head was born it was noticed that the cord was tightly wound about the child's neck. Employing the usual amount of force, an attempt was made to loosen the cord, but it did not yield and ruptured. The body was quickly delivered and an examination revealed a rupture of the umbilical cord within the abdominal wall. The edges of the cord were so retracted into the abdomen that they could not be grasped with forceps. Hemorrhage was not very profuse. The child continued crying.

Under the circumstances, the procedure that seemed most logical and most easily executed was compression. A hard roll of cotton was hastily applied with an abdominal band rather tightly secured.

The cord measured 35 cm. in length, which probably explains why it could not be unwound from about the child's neck.

No blood being detected through the abdominal band, same was not disturbed for eight hours. There was no further hemorrhage but only a slight oozing for a time.

The entire quantity of blood lost was not more than about 6 drams. The umbilicus healed in the usual manner.

2837 Dickson Street.

[COMMENT.—The case reported is not extremely rare. Rupture of the cord intra partum has been observed frequently, rarely in spontaneous labors, more often in precipitate labors, and also as a result of manipulation to loosen the cord wound round the neck of the fetus and to slip it over its head. The force necessary to tear the cord differs in different cases; some cords are more resistant than others. The average cord will resist a pull of 5 to 20 pounds, when applied gradually. If applied suddenly, as by letting the weight fall the length of the cord, it will generally break with a weight of 1 to 4 pounds.

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[7] Fracastorius takes the name from Syphilus, a shepherd in the poem, who was stricken with the *disease for blaspheming* Apollo (liber iii, 329-332):

> "Syphilus ostendit turpes per corpus achores,
> Insomnes primus noctes convulsaque membra
> Sensit et a primo traxit cognomina morbus,
> Syphilidemque ab eo labem *dixere coloni.*"

[8] See the chapter on Valerius Cordus in "Landmarks of Botanical History" by Dr. Edward Lee Greene (Smithsonian Misc. Collect., v. 54, Washington, 1909, pp. 270-314). Charming in style and irreproachable in scholarship, this work is cordially recommended to physicians as the best history of early botany and materia medica that has yet appeared.

The cord generally tears near the fetus and not seldom at the place of insertion. The mode of the tear is interesting and explains why serious bleeding after a tear is not very common—at least much more rare than after the cutting of the cord. The tear is irregular and oblique through the amnion, which ruptures first. Then the arteries tear, and lastly the vein. The intima of the arteries rolls in and the muscularis contracts, which causes a rapid closure of the vessels. Because of this tendency to spontaneous arrest of hemorrhage, compression is generally efficient, as in the case recorded above. Seizure of the vessels with the forceps and the use of a small catgut ligature would be easy and more surgical.

This case might serve to justify Shultze's method of managing cases of winding of the cord around the neck. He objects to any attempt to slip the cord over the head as being unnecessary and likely to rupture the cord or to cause a separation of the placenta. As soon as the head is born there is no longer danger of compression of the cord. If the cord is long, the birth of the body will follow without trouble. If it is absolutely or relatively too short, then it is better to apply a double ligature and cut the cord between the ligature.—Ed.]

A LARGE LIPOMA OF THE LARYNGOPHARYNX: REMOVAL EXTRA-ORALLY UNDER COCAIN *

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CHICAGO

The extreme rarity of fatty tumors in the pharynx, the size of the one under discussion, the comparative safety and simplicity of its removal through the mouth, and the improvement in weight, general health and comfort of the patient due to its extirpation, are reasons for placing this case on record. So extremely rare are lipomata in this region that I finally abandoned searching the literature and accepted the statement in the 1909 edition of Dr. D. Braden Kyle's "Diseases of the Nose and Throat" that but one pharyngeal lipoma had at that time ever been reported. That patient was eighty years of age; the tumor originated from the left side of the epiglottis and from the pharyngeal wall; and the symptoms were those of a movable foreign body.

History.—In October, 1907, when I first saw Mrs. C., she was a rather small woman of 27 years. She had lived in central Wisconsin and had never succeeded in obtaining an explanation of her symptoms. For an indefinite number of years the patient had experienced a vague feeling of "something growing in the throat" and of difficulty in swallowing, requiring an effort to get the bolus started, and sometimes actual inhibition of the swallowing act at its inception. A tendency for food to lodge somewhere and be recovered after some hours or even two or three days had existed. Breathing was quite decidedly interfered with, noticed most on exertion, and a noise in breathing was present a part of the time, especially at night. But like most instances of similar slow onset of obstructive tumors, the patient seems to have accommodated herself well to the advancing growth; for, aside from slight nervousness, she was apparently in good health, and yet certainly the nutritive processes were being interfered with more than was at the time realized, as shown by the great increase in body weight following removal. Nothing of moment bearing on the condition was apparent in her medical history; she had had goiter at 13, which had receded, rheumatism, measles, acute appendicitis and acute tonsillitis, and moderate nasal occlusion, found to be due to chronic intumescence.

Examination.—Some enlargement of the glands at the angles of the jaw was noted; this had been present for some time. But the external surface of the neck gave no indication of any abnormality within, even on palpation, except that inward pressure slightly below the angle of the jaw on the right produced dyspnea. Thus the external structures of the neck gave not the slightest indication of involvement by the neoplastic process. The tumor could be seen on the posterior and right lateral wall of the pharynx on depressing the tongue. Its uppermost margin reached to the height of the base of the uvula when the soft palate was at rest. From here it extended downward until its broadened lower portion lay over the laryngeal opening half an inch above the arytenoid cartilages. Thus air in passing in and out of the larynx had to take a markedly twisted course, around the overhanging growth. The tumor was much broader at its base, tapering gradually toward its upper end; its shape at any one time was probably modified by the effect of gravitation, due to changed position, for it seemed capable of considerable movement; at its lower part the growth extended more than two-thirds the distance across the laryngopharynx from right to left and gradually this breadth lessened until at the upper part the lateral extent was only one-third the way across. It was covered by healthy-appearing mucous membrane, without evidence of congestion or of enlarged vessels. On palpation the tumor seemed remarkedly soft and yielding, not firm enough for an ordinary solid, easily mistaken for a fluid, as if a somewhat flexible-walled sac were only partially distended with a liquid, thus permitting the contents to be pressed from one part of the sac to another. Being not at all tender, and, besides, of long standing, it was thought at this stage of the examination, both by two other experienced laryngologists who examined it and by myself, to be a cyst. The aspirating needle passed through a thick wall and then the distal end could be moved freely about, as if in a cavity; but no fluid could be obtained; the needle was plunged in straighter and entered a soft substance, thought possibly to be viscid fluid, but nothing could be aspirated. A trocar having a much larger bore than that of the needle was then employed, but with an identical experience. Incision then was made and this disclosed fatty tissue, which could easily be separated from what was evidently the capsule of a tumor. The needle and trocar had shoved the tumor away from its capsule, thus creating a cavity, easily mistaken for a fluid sac. The microscope served to confirm the lipomatous appearance of the growth. Thus the examination had proved an encapsulated lipoma superficially placed in the fascia beneath the mucous membrane and with no indication of a vascular supply different from lipomatous growths generally. Clearly the indication was to attempt removal in the simplest manner possible.

Operation.—Ten per cent. cocain with full commercial strength suprarenalin (epinephrin) were applied over the surface of the growth, and cocain was applied also to the operative field during the act of removal. An incision through the mucous membrane and the capsule of the tumor was made vertically, near the center of the swelling, from about the level of the tip of the uvula to a point slightly below the level of the tip of the epiglottis, a distance of 3 inches. The tumor was seized above through this incision with forceps and the process of enucleation carried on. Pulling on the mass brought the hyoid bone plainly into the pharyngeal space. Mostly with blunt instruments, including the finger, but occasionally with tonsil scissors and knives set at an angle in long handles, for the heavier binding threads, the growth was shelled out of its capsule. It was not always easy to see clearly whether one was working within or without the capsule and considerable time was wasted at first through this fact, but no more than moderately severe difficulty was experienced at any time. In the course of the enucleation a thick plate-like mass of tissue fell out into the wound and was cut off. This was apparently the overdeveloped fascia that ordinarily exists between the mucous membrane and the constrictor muscles. The hemorrhage was slight and the wound could be kept quite free from blood. It was found unnecessary to ligate any vessel. After removal the edges of the incision lay an inch apart. They were easily brought together and three stitches taken. The fourth was prevented by the breaking of the edges of the mucous membrane; this left the lower angle of the wound open for about three-quarters of an inch in a vertical direction and three-eighths of an inch in width and this was the only provision made for drainage. But moderate pain was experienced until the last stitch was taken.

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* Read before the Chicago Laryngological and Otological Society, April 18, 1911.

Postoperative History.—Feeding was carried on through the mouth, using small swallows of milk; the stitches held. The temperature reached 101 F. on the following day. Only moderate reaction occurred, with very little edema. After the third day the temperature did not reach higher than 99.5 F. and the hyperemia then became slight; a gland on the outside opposite the incision became a trifle tender, but quickly disappeared. On the eleventh day the wound was scarcely visible and the pain entirely gone.

Specimen.—The tumor was characteristically lobulated, and, as it lay flat on the table, measured 3¼ inches long, 2¼ inches broad and 1 inch thick, its shape altering with its position. Since the patient immediately left the city, I did not see her for three years, although rumors of great increase in weight reached me. When I did see her, I was somewhat astonished to note the remarkable change in physique, the patient having altered in type from a somewhat small to a much larger woman. The weight had increased from 124 to 156 pounds. After the operation, the husband had felt alarm at the quietness of his wife's breathing, and the patient would find her food well down the esophagus before she realized the act of swallowing had begun. Excepting for two or three small obscure patches of thin, shiny scar tissue, the pharynx appeared normal.

15 East Washington Street.

GLASS TUBE IN THE MALE URETHRA

NEWTON EVANS, M.D.

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History.—Some time since a man aged 27 came to my office saying there was a piece of glass tubing in his urethra which he was unable to remove. He gave no satisfactory information as to how it came there.

Examination.—A few drops of blood appeared at the meatus and there could be felt in the perineum just behind the scrotum a firm body in the line of the urethra; this proved to be the end of the glass tube. By digital examination of the base of the bladder through the rectum the deeper end of the object could be felt lying within the cavity of the bladder and pushing the posterior wall of the bladder backward on the rectum. The anterior end of the object could be felt by introducing a urethral sound.

Removal.—It occurred to me that the tube might be removed through the lumen of an endoscope or urethroscope. Accordingly, I introduced an endoscope, size 26 F., till it came in contact with the forward end of the glass tube, and after removing the obturator I was able to feel the tube slip into the opening of the endoscope. Then with one finger in the rectum I was able to force the tube forward still farther into the endoscope, until finally it was easily removed within the instrument. No anesthesia was used.

There was little tenderness of the parts after the manipulation. The tube was 3/16 of an inch in diameter and between 5 and 6 inches in length. At both ends the tube was rough broken. The patient recovered without further difficulty.

631 Second Avenue, South.

THE STATUS OF SALVARSAN IN PELLAGRA, BASED ON THE REPORTS OF TWENTY-ONE COLLECTED CASES

H. P. COLE, M.D., AND GILMAN J. WINTHROP, M.D.

MOBILE

The occasional beneficial effects following the administration of various forms of arsenic in pellagra has led several physicians to employ salvarsan in pellagra. In an effort to obtain an early opinion of the therapeutic results we have collected the reports of sixteen unpublished cases, and these together with three cases reported by Nice, McLester and Torrance,[1] and two cases of our own, form the basis of this report. This includes, as nearly as we can ascertain, all the cases of pellagra treated with salvarsan up to May 1, 1911.

We take pleasure in thanking the following physicians for the reports of the sixteen unpublished cases that make this report possible: Dr. Rufus T. Dorsey, Atlanta, Ga., two cases; Dr. E. H. Martin, Hot Springs, Ark., one case; Dr. W. J. Love, Opelika, Ala., one case; Dr. Wilmer L. Allison, Ft. Worth, Texas, three cases; Dr. C. C. Bass, New Orleans, La., one case; Dr. J. Edgar Paullin, Atlanta, Ga., seven cases; Dr. J. D. S. Davis, Birmingham, Ala., one case.

The fact that all the patients have been recently treated precludes any positive conclusions as to any permanent beneficial effects resulting from the use of salvarsan in this disease. All types and stages of the disease have been treated. There has been no uniformity in the manner of administration or the quantity or frequency of the dose. The drug has been given both intramuscularly and intravenously, in amount from 0.1 to 0.69 gm. Most of the cases had a single dose, one had two doses and two were given three doses.

Hospital residence and the coincident administration of other forms of arsenic has to be considered in the reported beneficial results of at least four of the improved cases. To what extent the saline solution administered with the drug intravenously has bearing on some of the cases improved, it would be difficult to say, though it is worthy of consideration. There was an untoward effect in one case, a profuse diarrhea following the drug administration. The physician having this experience administered salvarsan in seven cases and noted no improvement whatsoever in any of the seven cases.

Type of case treated: mild acute, three; mild chronic, four; severe acute, four; severe chronic, seven; type unknown, three; total, twenty-one.

No improvement was noted in ten cases, 47.6 per cent.; improvement noted for at least seven days with no relapse, seven cases, 33.3 per cent.; temporary improvement followed by relapse (death in one), four cases, 20 per cent.

Improvement was noted in the following type of cases: severe chronic, six cases; severe acute, two cases; type unknown, three cases.

CONCLUSIONS

Any administration of salvarsan in this disease of unknown etiology must be considered as empirical when we recall that this drug is considered specific for the *Spirochæta pallida*.

The well-known dangers of administering salvarsan to patients suffering from cardiac and renal lesions should contraindicate its use in many cases of pellagra because of their well-known tendency to myocardial and renal degenerations. If given at all it should be given in broken and repeated doses and preferably by the intramuscular method.

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[1] Nice, C. M., McLester, J. S., and Torrance, G.: The Journal A. M. A., March 25, 1911, p. 896.

The clinical evidence brought forth in this report shows only 33.3 per cent. of improvement lasting seven or more days. Considering that this includes the treatment of all the types of the disease and that no patients are reported cured, we feel that thus far salvarsan offers no better results than other methods of treatment.

202 Conti Street.

EXPERIMENTS ON THE TRANSMISSION OF SCARLET FEVER TO MONKEYS*

LUDVIG HEKTOEN, M.D., AND GEORGE H. WEAVER, M.D.
CHICAGO

In view of recent reports of the successful inoculation of monkeys with scarlet fever it was thought of interest to relate some experiments made in the interval from Dec. 10, 1909, to September, 1910. Materials from the throats and mouths of children with scarlet fever were collected on cotton swabs and the swabs washed off in milk. The milk thus infected was fed to monkeys. Thirteen monkeys (*Macacus rhesus*) were fed in this way; ten remained well, showing no fever or leukocytosis, and three died. The three monkeys which died may be designated as Nos. 1, 2 and 3.

No. 1 was fed the infected milk on Dec. 10, 11, 13 and 14, 1909, became sick December 20, and died December 21. The autopsy showed a fibrinous peritonitis. The peritoneal exudate and the heart's blood contained colon bacilli; no streptococci or other bacilli could be demonstrated by microscopic or cultural methods.

No. 2 was fed the same materials on the same days as No. 1. On Jan. 7, 1910, he became sick and died Jan. 17, 1910. At the autopsy there was a moderate general edema with fluid in the pericardium, and the urine in the bladder which was clear gave a marked zone of albumin with nitric acid, but no tube casts were found in it. Microscopically there were some parenchymatous changes in the kidneys.

No. 3 was fed infected milk on Jan. 26, 27 and 29, 1910. January 29 he became sick and died on January 31. Shortly before death the blood showed a leukocytosis of 38,800. At the autopsy no macroscopic lesions were found other than hemorrhage in the right adrenal. The pharynx was normal. Cultures from the heart's blood were sterile; no streptococci were found anywhere. Blood removed from the heart of this animal immediately after death was mixed with sterile milk, and fed to a healthy monkey (4) on Feb. 1, 2 and 3, 1910. On February 5, it became sick and refused food. Its temperature was 103.8 to 104.1 F. and the leukocyte count was 52,000. The leukocytes persisted for five days and disappeared, as the temperature subsided and the appetite returned.

We do not attempt to decide whether Monkeys 1, 2 and 3 really had scarlet fever, or whether the one which was fed the blood from Monkey 3 had this disease. The course of the sickness in this last animal, coming on four days after the feeding, running a short course accompanied by fever and leukocytosis, is very suggestive. We were, however, unable to observe any cutaneous eruption. If monkeys are susceptible to infection with scarlet fever, the susceptibility would seem to be rather slight and there must be a good deal of natural resistance as in man. We had hoped to add further observations before making a report, but as this matter is interesting so many just now, these experiments may be of use to others and are therefore reported.

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* From the Memorial Institute for Infectious Diseases.

THE CULTIVATION OF TISSUES IN SALT SOLUTIONS*

MARGARET REED LEWIS AND WARREN H. LEWIS, M.D.
BALTIMORE

The introduction by Harrison[1] of the important method of the study of the growth of small pieces of living tissues of cold-blooded animals transplanted into lymph and the later extension of this method by Burrows and Carrel[2] to warm-blooded animals by transplanting into plasma marks the beginning of a new epoch in experimental anatomy.

The result of the observations given below, that embryonic chick tissue will grow in various salt solutions, further broadens the field of work in that tissues can be studied in media all the constituents of which are known and the reaction of the cells to different substances can be more definitely determined.

After the cultivation of embryonic chick tissues in nutrient agar and bouillon media,[3] it was found that such tissues would grow nearly as well in Locke's solution to which small amounts of certain of the polypeptids and amido-acids had been added. Later it was discovered that these tissues grow nearly as well in various salt solutions. Over one hundred combinations have been tried with sodium chlorid, calcium chlorid, potassium chlorid and sodium bicarbonate, with and without sugars, and in the great majority of the solutions growth takes place. A more extended account of the growth of tissues in the salt solutions will appear in the *Anatomical Record* for June, 1911.

Locke's solution, first obtained from Dr. D. R. Hooker of the Physiological Laboratory of the formula, $NaCl$ .9 per cent., $CaCl_2$ .025 per cent., KCl .042 per cent., and $NaHCO_3$ 0.02 per cent. to which was added 0.25 per cent. dextrose has given quite satisfactory results in that the growths nearly equal those in plasma. Of three series containing eighty cultures in this medium, all showed growth, which reached its maximum in from twenty-four to seventy-two hours and lasted from three to eight days.

Good growth has been obtained, however, in the salts alone without the dextrose or other sugar. Sodium chlorid seems to be the one essential salt, as growth did not take place in the various combinations of the other salts without the sodium chlorid, while growth did take place in a pure sodium chlorid solution of 0.75 per cent. and 0.9 per cent. Growth took place in solutions of sodium chlorid with the other salts in which the percentage of sodium chlorid varied from 0.225 per cent. to 1.695 per cent. There might also be great variation in the percentages of the other salts. Evidently tissues will grow in solutions of varying osmotic pressures.

The character of the growth in these salt solutions is similar to that of tissues in plasma but the growth is not so extensive. Radiating and migrating cells, reticular formations, various types of membranes and both mitotic and amitotic cell division are found in the cultures. The intestine, for example, often shows membrane growth, reminding one very much of peritoneum. Sympathetic nerve fibers grow in various salt solutions and also in such solutions plus dextrose. Their mode of growth is very similar to that observed by Harrison in amphibia and by Burrows in the chick when the material was taken from the central nervous system and transplanted into lymph or plasma. Since such growth does take place in fluid media, it is evident that the fibrin network is not essential for the outgrowth of the nerve fiber, nor is it necessary for the growth of other cells or the formation of long slender processes of various kinds. The under side of the cover-glass often seems to act as a support for the outgrowing cells and fibers. This adhesion of the growths to the cover-slip makes it possible to study the cultures to better advantage than otherwise since most of the growth is often in one plane.

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* From the Anatomical Laboratory, Johns Hopkins University.

[1] Harrison: Anat. Rec., 1907, i; 1908, iii; Jour. Exper. Zool., 1910, ix.

[2] Compt. rend. Soc. de biol., 1910; THE JOURNAL A. M. A., Oct. 15, 1910, p. 1379; Dec. 10, 1910, p. 2057; Jan. 7, 1911, p. 33; Jour. Exper. Zool., January, 1911; Jour. Exper. Med., No. 3, 1911; No. 4, 1911.

[3] Lewis and Lewis: Bull. Johns Hopkins Hosp., April, 1911.

The material which gave the best results was from embryo chicks less than ten days old. The cultures were grown in hanging drops.

THE EFFECT OF INJECTIONS OF INDOL AND TYROSIN IN EXPERIMENTAL ANIMALS

A PRELIMINARY REPORT *

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CINCINNATI

During the past year we commenced a series of experiments on rabbits and white rats, the object of which was to discover what relation chronic intoxications with some of the lower derivatives of protein decomposition bore to changes in the adrenals and kidneys. We had a suspicion that indol might have, in the process of secretion, or in the process of transformation into indican, or both, an effect in producing changes in the organs which would indicate hyperactivity of certain organs (the liver, and perhaps the adrenals) or irritative changes in others (the kidneys). There seemed to be some basis for this suspicion in the fact that indicanuria, especially when it is of well-marked degree, is accompanied by albuminuria and cylindruria. It seemed useful to discover, therefore, whether injections of indol would produce any noticeable changes in the kidneys; and, since the liver has been supposed to be the site of transformation into indican, it seemed possible that some changes in that organ might be expected. The tyrosin series had a different basis. We were interested in the physiology of the adrenal glands and had been led to suspect that the pigmentation of Addison's disease might be a result of variation in either the content of the chromaffin tissues in tyrosinase, or in the overabundance of tyrosin or some related substance in the body. This was indicated by the suggestion of von Fürth that melanin and related bodies are the result of the action of tyrosinase or related oxydases on the aromatic constituents of the protein molecule, a suggestion which, as Adami says, has been supported by Halle, who demonstrated that tyrosin is converted into epinephrin by a ferment in the adrenal. Adami suggests that pigmentation in Addison's disease is produced when this ferment is deficient—when, in other words, the tyrosin is not converted into epinephrin by the adrenal, but into melanin in the skin. All of which induced us to attempt to discover whether tyrosin would stimulate the adrenals to increased activity or whether large excesses of tyrosin would produce melanosis in experimental animals. If the former were the case, we might expect to find as a result of increased epinephrin production either arterial changes or renal changes or both.

Finally, because of the similarity in origin of indol and tyrosin, we ran parallel series, each with its control.

We have no definite knowledge of the manner of action or of the effects of tyrosin in the organism. We know but little more concerning indol. We are led to think that massive doses of the latter may be consumed with no, or but little, ill effects in normal man (Nesbitt). Such effects are headache, insomnia, confusion and irritability (Herter), and, with decreased activity of the cells in disposing of such substances, intoxications are possible (Richards and Howland). It is, however, possible that comparatively small doses given over long periods of time may, even without producing symptoms, cause changes in the organs which may lead to very serious results.

Our series of experiments deal with the possibilities of such results.

In performing these experiments we used rabbits and white rats. Originally we used intravenous injections. Later we resorted to intraperitoneal injections. We used saturated aqueous solutions of Kahlbaum's indol and tyrosin.

For the sake of brevity we shall at this time merely summarize our results by saying that after these injections we have found the medullas of the adrenals hyperplastic and apparently hypertrophic, and that the evidences of chromaffin activity increased in proportion to the number of injections. The chrome reaction is similarly increased. We also found very slight interstitial changes in the kidneys.

We had, at the commencement of our experiments, a suspected relation between tyrosin and adrenal changes; a suspicion of a possible relation between indol and renal changes; and the possibility of a relation between adrenal and renal changes.

From our incomplete results, the small importance of which we realize, we are not justified in drawing any conclusion, but we might suggest for the sake of perspective that, provided it be true that a true hyperactivity of the chromaffin is produced by one or other, or both of the substances we have used, or by other substances of the same chemical order, that is to say, belonging to the aromatic series, it might be suspected that such an hyperactivity, extending over a considerable period of time, may be a cause, perhaps the cause, of the symptom-complex known as diabetes. This would result from a change in the chromaffin-pancreas equilibrium.

Eppinger, to whom the idea possibly was suggested by Boinet, has remarked that tuberculin may be a substance which of itself produced inactivity of the chromaffin tissues of the body, and that by means of tuberculin the pancreas-adrenal equilibrium can be upset on the adrenal side; that is to say, in the Addisonian direction. In other words, under the influence of tuberculin the glycolytic function of the organism is increased.

Our experiments in this direction have led us already to a temporary belief, at least, in Eppinger's conception. We have found that seven injections, each of 0.5 mg., of tuberculin led to an increase of sugar consumption in rabbits. A normal rabbit after 50 gm. of glucose (by mouth) showed 0.43 gm. of glucose in the urine (1.72 per cent.). The same rabbit after seven injections of tuberculin showed 0.07 gm. (0.35 per cent.). These results with tuberculin, especially in view of the fact that the medulla of the glands shows atrophy after tuberculin treatment, are interesting if considered with

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* From the Laboratories of the Cincinnati Hospital.

* Read before the Cincinnati Society of Medical Research, April 6, 1911.

the fact that in the diagnosis of Addison's disease tuberculin should be used with the greatest circumspection. Our final suggestion is that it seems possible that tuberculin injection may be of value in the treatment of diabetes, because of its influence on the chromaffin, and, through that influence, because of its tendency to bring back—to correct—the adrenal-pancreas equilibrium. We are continuing our work by carrying out a careful series of physiologic experiments.

CONJUGAL TABES DORSALIS *

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PHILADELPHIA

Recent discoveries have thrown a strong light on certain hitherto suspected but not definitively demonstrable relations of syphilis. The view that tabes dorsalis and paretic dementia are essentially of syphilitic origin has been finally established by the results of the serum-complement reaction. For the purposes of this discussion tabes and paresis may be looked on as expressions of the same morbid process, in the one instance affecting especially the spinal cord, and in the other especially the brain. Not rarely the two affections are associated in the same patient. Of the large number of persons infected with syphilis, however, only a comparatively small proportion become tabetic or paretic. Negroes, although frequently syphilitic, rarely develop tabes or paresis. Perhaps they possess an inherent racial immunity. An explanation for the disparity in the incidence of the two diseases must be sought in some special factor, whether on the part of the infected individual or on the part of the infecting virus. This may reside in a lowering of the resistance of the nervous system as a result of previous disease, or intoxication or traumatism, or other debilitating or exhausting influence; or in a particular and peculiar activity of the syphilitic infection. These forces may operate separately or jointly.

Occasionally tabes or paresis appears in several members of the same family, simultaneously or consecutively. Thus, husband and wife may be affected; sometimes in addition a second husband or wife, or one or more children. Under such circumstances syphilis is quite invariably the common etiologic factor. Each of those affected may present the same form of disease of the nervous system, or one may suffer from one and the other from another form. The association is not common, although probably more so than is apparent, as inquiry is not, as a rule, directed toward this point. Moreover, the disease of the nervous system does not usually appear simultaneously in those affected, and the association may for this reason be overlooked. That tabes and paresis are more prevalent among men than among women is most likely due to the fact that both affections are so often secondary to syphilis, and that this disease is usually acquired through illicit intercourse, an infected woman inoculating several men.

The occurrence of paretic dementia in husband and wife appears to have been recognized only since 1863, when Kjellberg[1] reported the first instances. Tabes dorsalis in husband and wife was first recorded by Voigt[2] in 1885. Both patients presented evidences of syphilis, and the venereal disease, as well as the disease of the nervous system, appeared the earlier in the man. Strümpell,[3] in 1888, reported a similar association and sequence. A comparatively small number of cases of like character have been reported since, largely from German sources. American literature contains a case recorded by F. Savary Pearce[4] from the practice of S. Weir Mitchell, and refers to four other cases observed by Dr. Mitchell; a case recorded by A. P. Francine[5] in a negro barber and his wife; and three cases of conjugal paretic dementia recorded by Richard Dewey.[6] Mendel,[7] in 1895, reported sixteen cases of conjugal tabes and paresis, and came to the conclusion that under such circumstances paresis occurs more commonly than tabes, and that the husband is almost invariably attacked first. Raecke,[8] in 1899, was able to tabulate sixty-nine cases of conjugal tabes and paresis, including seventeen of his own. In twenty-seven there was paresis in both; in twenty-two, tabes in both; in fourteen, paresis in husband and tabes in wife; in six, paresis in wife and tabes in husband. It thus appears that the husband is the more commonly paretic, the wife the more commonly tabetic. The former was generally attacked first.

Moenkemoeller,[9] in 1900, reported eighteen additional cases and referred the usual occurrence of the disease in the husband first to the fact that he is generally syphilitic and infects his wife.

Idelson[1] considers the incidence as more than accidental; else other disorders of the nervous system might be expected to occur in husband and wife with equal frequency. He reports the simultaneous appearance of paresis in husband and wife, both syphilitic at the same time. He was impressed by a certain uniformity in the course of the disease in the persons affected.

Erb[10] concurs, from an abundant experience, in the view that the tabetic husband and wife are almost invariably syphilitic, the former generally infecting the latter, less commonly the wife the husband, and both becoming tabetic or paretic in succession.

Suntheim[11] has made a comprehensive study of conjugal tabes and paresis, reporting twenty-three previously unrecorded cases among 255 carefully studied patients seen in the course of six or seven years. Among 101 cases of tabes in men there were five in which the wife was similarly affected; among fifty-one cases in women there were nine in which the husband also was affected. In sixty-one cases of paresis in men there were five in which the wife also was affected, and among forty-two cases in women there were four in which the husband also was affected. Suntheim points out that while at the beginning the disease of the nervous system, as a rule, pursues the same course in husband and wife, there are differences in its subsequent evolution, the development being more rapid and the symptoms more pronounced in the second person attacked. Often the interval between the syphilitic infection and the appearance of the symptoms of the disease of the nervous system is the same in both. Suntheim found that the syphilitic infection was conveyed through the husband in ten instances as against one in which it was conveyed through the wife (and in this instance the disease was acquired by accident); symptoms of the nervous disorder appeared first in the husband in seven instances

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* Read before the Association of American Physicians, May 9, 1911.

[1] Cited by Idelson: St. Petersburg. med. Wchnschr., 1901, xliii, 473.

[2] Centralbl. f. Nervenh., Psychiat. u. gericht. Psychopathol., April 15, 1885, viii, 169.

[3] Neurol. Centralbl., 1888, xvii, 122.

[4] Jour. Nerv. and Ment. Dis., 1895, xx, 8.

[5] Am. Jour. Med. Sc., 1900, cxix, 543.

[6] Chicago Med. Recorder, October, 1893, p. 233

[7] Neurol. Centralbl., 1895, xiv, 335.

[8] Monatschr. f. Psychiat. u. Neurol., 1899, vi, 266.

[9] Monatschr. f. Psychiat. u. Neurol., 1900, viii, 421.

[10] Berl. klin. Wchnschr., 1904, iii, 64.

[11] Inaugural Dissertation, Leipsic, 1909.

and in the wife in three instances. In the majority of instances both husband and wife suffered from the same form of nervous disease. The interval between the syphilitic infection and the development of the disease of the nervous system varied between two and thirty-five years, averaging fifteen years, in the husband 17.7 years and in the wife 13.3 years. The duration of the nervous disorder was longer in the secondary than in the primary cases, although when tabes developed in the second person the course of the disease was less rapid than when paresis developed.

I have had under observation the case of a husband and wife with tabes dorsalis, symptoms of the disease appearing in both at about the same time. No history of syphilis was elicited, although infection may have occurred. The woman presented herself in July, 1907, when she was 40 years old, complaining for one year of a sense of burning on the anterior aspect of the chest and in the sacral region, and of general weakness. She was neurotic and perspired freely, and she did not appreciate distinctly pricking the flesh of the abdominal wall. There was some dyspnea and a feeling of suffocation. The bowels were constipated and the stools contained mucus. At times there was headache, and sleep was variable. The action of the heart was rhythmic and the sounds were clear. Menstruation had been absent for a year. Three years previously the woman had fallen in alighting from a street-car, and she had made a settlement with the company. At this time her husband was 55 years old, and he was said to be "rheumatic" and not strong. He had been married previously and his first wife had borne three healthy children; five other children had died from various causes. The second marriage had resulted in the birth of eight children and one miscarriage; five of the children were well and three had died (chicken-pox, cholera infantum, circumcision). In January, 1908, the woman complained of a sense of constriction about the waist, together with headache, vertigo, weakness in the lower extremities and partial incontinence of urine, but the knee-jerks were preserved, as they were also a month later.

In January, 1910, there was difficulty in walking, with ataxic gait and swaying station, weakness of the anal sphincter after the use of laxatives, and difficulty in expulsion and retention of urine. The knee-jerks were now absent and they could not be elicited even with reinforcement. Coordination in the upper extremities also was somewhat impaired. The pupils were of moderate size and reactive to light and in accommodation.

The husband came under observation in August, 1909, when he was 57 years old. He had been complaining for eighteen months of a lack of feeling and of numbness in the lower extremities, with difficulty in locomotion. His gait was awkward, though not characteristically ataxic, the feet being lifted high, somewhat as if to avoid pain, and station was unsteady. There was also some want of control of the bladder. The pupils were of moderate size, but not reactive to light. The knee-jerks were absent, and could not be elicited on reinforcement. There was a history of "rheumatism" nineteen years and also five years previously.

It is a little difficult to decide whether in these two patients the symptoms of tabes did or did not develop simultaneously, the woman complaining of constriction about the waist, weakness of the lower extremities and partial loss of control of the sphincter of the bladder, but with preservation of the knee-jerks, at about the same time as the man was complaining of numbness in the lower extremities, with difficulty in walking. The disease of the nervous system was recognized earlier in the man.

Through the courtesy of the late Dr. Wharton Sinkler, of Dr. Morris J. Lewis and of Dr. John K. Mitchell, I have been permitted to examine the dispensary records at the Philadelphia Orthopedic Hospital and Infirmary for Nervous Diseases, and among 244 cases of tabes dorsalis seen during sixteen years I have been able to find only two instances in which the disease occurred in husband and wife. One of these is that of the colored man and woman already reported by Francine.[5] The other is herewith reported:

A woman, 45 years old, came to the clinic of Dr. John K. Mitchell June 12, 1905, complaining of pain in the lower extremities of three years' standing, incontinence of urine for two years, difficulty in walking for one year, paresthesias of the lower extremities, with swaying station, ataxic gait, incoordination in the upper extremities, abolition of knee-jerks, ankle-jerks and elbow-jerks, pin-point pupils, reacting neither to light nor in accommodation, and grayish coloration of the optic disks. Her husband, who did not apply for treatment and insisted that there was nothing wrong with him, but admitted having had a chancre earlier in life, presented markedly contracted pupils, apparently reacting in accommodation but not to light, swaying station and abolition of knee-jerks. He was able to go on with his work as a pattern-maker.

CONCLUSIONS

Syphilis is a common disease. It is the most important, if not the essential, cause of tabes dorsalis (and of paretic dementia). Tabes and paresis may be considered expressions of the same morbid process, in the one instance affecting especially the spinal cord, in the other especially the brain. Sometimes they occur together in the same patient. The disparity in incidence of the two affections may be due to individual predisposition or to some peculiarity of the syphilitic virus. Negroes rarely, if ever, develop tabes, though they are frequently syphilitic. Sometimes several members of a family develop tabes or paresis, sometimes husband and wife, sometimes in addition a second husband or wife, sometimes one or both parents, together with one or more children. The association is not common, although probably more so than is apparent. When husband and wife suffer, the former generally is attacked first, the latter subsequently. A moderate number of cases have been recorded in the literature.

1019 Spruce Street.

THE GASTRIC WEAK LINE IN WOUNDS OF THE ABDOMINAL WALL *

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After operations on the stomach the wound of the abdominal wall sometimes opens unexpectedly a few days after operation. There is no evidence of sepsis, and primary union appears to have taken place in advance of the accident.

If the patient survives, tardy repair follows, with little tendency to free granulation and suppuration. The discharge from the wound surface at first is sero-sanguinolent. Such cases have occurred in my own practice from time to time, and conversation with surgeons indicates that all of us are more or less familiar with the subject, but no one seems to have an explanation for the frequent occurrence of this complication after stomach operations, which is out of proportion to somewhat similar failures of union noted after operations elsewhere in the body, and in some cases explainable, no doubt, along the lines to be noted presently.

Recently I had one such case at the Post-Graduate Hospital after separation of pyloric adhesions, and

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* Read at the fourteenth annual meeting of the American Gastro-Enterological Association, Philadelphia, April 10, 1911.

another in the Plant Pavilion at St. Luke's Hospital following a pyloroplasty. The house surgeons at both hospitals informed me of two other similar cases at the same time in the practice of other surgeons.

These four cases, coming to my knowledge simultaneously, made it desirable to seek for an explanation for an accident which would seem to call for special description.

Dr. Edward Preble was engaged to study the literature on the subject at the library of the New York Academy of Medicine, and reported that nothing relating directly to the subject could be found.

REPORT OF CASE

History.—The case on which the following remarks are based was that of the patient at the Post-Graduate Hospital, C. J., aged 45, a baker, well nourished, except that he had lost 11 pounds in weight during five weeks before his coming to the hospital. He had suffered from epigastric pain, constipation, morning vomiting, and acid dyspepsia. He was admitted to the service of Dr. Edward Quintard on Jan. 16, 1911. Dr. Ludwig Kast made a series of examinations of the stomach with the aid of the fluoroscope and bismuth solution in the stomach, and reported interference with stomach motility at the pylorus; he thought that the patient very likely had at that point a scar of an old ulcer. A certain shadow at one time suggested the presence of a tumor, but no tumor was palpable. My own impression was that he had a case of adhesions of the bile-tract region, engaging the pylorus. The patient under medical treatment while at the hospital gained seven pounds in weight, but symptoms continuing, he was transferred to my service on February 1.

Operation.—I made a mid-line incision and separated the extensive adhesions about the pylorus, of the type which I have described as "cobwebs of the attic of the abdomen," due apparently to the influence of toxins excreted by the liver, or to local infection. A sheet of Cargile membrane was applied to the area from which adhesions had been separated, to prevent recurrence.

Postoperative History.—The wound was dressed for the first time February 3, and primary union reported. Four days later the wound suddenly opened for a distance of four inches through the skin and superficial fascia. There was no local evidence of inflammation. The patient left the hospital a month later with a wound which had tardily progressed toward repair.

Shortly after the wound opened it occurred to me that evidence of some trophic fault was sufficient for investigation along the lines suggested by Head,[1] relating to certain superficial zones which are known to be irritated in connection with irritation of different viscera. Ross and Sherrington had previously shown that with certain kinds of visceral disturbance an impulse was sent along afferent nerves to definite segments of the spinal cord, and referred along the somatic nerve distribution from such parts of the cord, giving areas of skin tenderness.

Head arranged these areas in zones, and showed that when we have ulcer of the stomach sensory nerves of the skin are irritated in a zone which forms a triangle, the base of which is at the linea alba, extending between the ensiform cartilage and the navel, with its apex at the ninth intercostal space.

It seemed to me we might assume that trophic nerve disturbance or neurovascular disturbance would occur in the same superficial area along with disturbance of the sensory nerves, and that could account for the failure of repair in the area of the stomach zone of Head. On examining the right Head zone of this patient with the point of a pair of dressing forceps I found instead of hyperesthesia a distinct lessening of sensation in the right Head zone, but in the left zone two small points of hyperesthesia.

On the following day one of my assistants, Dr. Freudenthal, made an independent examination, not knowing of mine, and said that he seemed to find diminished sensation in the right Head zone, and no point of hyperesthesia.

At this time the patient was rapidly recovering from the source of irritation at the pylorus, and it is probable that we had in the superficial zone a disturbance different from that which might have been found just in advance of the operation, or immediately afterward.

Subsequent examination of this patient by Dr. Freudenthal, Dr. Kast, and myself indicated that sensation in the stomach Head zone was practically normal. We seem, however, to have rather good evidence that the trophic nerves, which are distributed along with the sensory nerves of the superficial area, are irritated simultaneously with the sensory nerves, and this leads to failure of repair in these wounds after stomach operations.

Dr. Kast suggested that contributory testimony would be furnished by applying cantharides cerate on a point within the Head zone and on a near-by part of the body in order to note the comparative character of reactions. Shortly afterward he applied cantharides cerate for six hours at a point in the Head zone of a case of gastric ulcer in a chlorotic young woman, and in a case of angina pectoris in a man, 57 years of age.

There was a distinct difference between cutaneous reaction within the Head zone and at the distant test area. Reaction was more intense within the Head zone and lasted twenty-four hours longer than in the distant test area.

A third case in which Dr. Kast experimented showed no difference in reaction at two test points, but the two positive cases seem to offer definite testimony in support of my theory that the failure of repair in wounds of the abdominal wall after stomach operations is due to trophic or neurovascular disturbance associated with sensory nerve disturbance in the stomach zone of Head.

616 Madison Avenue.

CHRONIC LEAD-POISONING: REPORT OF A CASE

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RANDOLPH, N. Y.

The following case which occurred in my practice is, I believe, fairly typical, the source very plain, and readily illustrates that ignorance plays a prominent part in the causation of lead-poisoning.

The patient in my case, who had no idea that lead was poisonous, was one of sixteen girls working at the same occupation of sealing tin cans. More cases were undoubtedly averted by the recognition of this case and explanation to the others of the cause of their companion's illness.

The circulation of printed information among employees where the various preparations of lead are used would probably eliminate a certain per cent. of cases. Medical inspection, as Hamilton[1] says, would of course be ideal.

History.—E. F., aged 16, employed in a milk condensery, sealing cans, complained of cramps and vomiting and weakness

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[1] Head: Brain, vols. xvi, xvii, xix, 1893, 1894, 1896.

[1] Hamilton, Alice: Lead-Poisoning in Illinois, The Journal A. M. A., April 29, 1911, p. 1240.

The care of the bowels other than the local treatment of the inflammation or the treatment of the disease itself is important. A calomel purge should be administered in the beginning, followed by a saline, as *Rochelle salt* or something similar, this to cause a clean small intestine and a complete evacuation of the large intestine. *Subsequently there is probably little necessity for administering a laxative.* However, it is often well to give a dose of castor oil once in several days, not only for cleaning out the bowel and then having subsequent rest, but for its actual soothing effects. If it is deemed best not to give the full dose of calomel (and it is better to give one sufficient dose of calomel than small divided doses) the sulphate of magnesium may be used, given in doses of 4 grams (1 dram), and repeated every two hours until the movements become odorless and watery.

There can be no question of the advisability and necessity, as soon as the bowels are known to be thoroughly emptied, of stopping the movements for a certain number of hours by morphin, best given hypodermatically. The frequency of its administration is determined by its action and by the amount of pain.

Locally the condition is a surgical one. There is an inflamed, perhaps ulcerating, mucous membrane, a large sinus, which *we can in a way treat satisfactorily.* It should be remembered, however, that this sinus has great absorptive powers; therefore, medicaments must not be used too strong, nor should we use poisonous antiseptics. *Whether high colon washings will go as far as the ileocecal valve is not now under discussion*, but certainly the ascending colon and perhaps the transverse colon may be washed and cleansed of irritants. This large *sinus (colon) may be irrigated with plain boiled water* to which a small amount of salt has been added, as a teaspoonful to the pint, with or without a teaspoonful of boric acid, and *this solution should be used either tepid or warm*, if there is prostration. If but a small amount is used and there is much fever, it may be used cold. After the fecal matter and mucus have been washed away and the returned solution is clean. the colon may be treated with a weak permanganate of potash solution, as 1 to 10,000; or a 1 part to 8 of peroxid of hydrogen solution may be used. The frequency of such irrigation depends entirely on the case. Once a day in the first part of the disease is generally sufficient, and later such colon washing may be done once or twice a day, depending on the amount of benefit resulting. These washings will sometimes stop the movements of the bowels for hours, even without morphin. If followed by a hypodermatic injection of morphin rest, both of the patient and of the intestine, is prolonged.

If the disease progresses and immediate healing of the inflammation does not occur, and actual ulceration seems to have developed, as shown by the amount of bleeding, an occasional irrigation of nitrate of silver, 1 part to 1,000 (not more than one pint at any one time, viz., 0.50 gram (7½ grains) to a pint of water) is of benefit. Such an injection should be given but once in four or five days, and if the liquid does not immediately flow out of the colon a solution of salt should be immediately injected. The salt forming an insoluble sodium chlorid, will prevent any poisonous absorption of nitrate of silver.

Sometimes injections of bismuth subcarbonate solutions or suspensions, or starch water are of benefit. Certain it is that properly used colon washing will cause the number of movements to be reduced to at least one where there were three or four before.

If there is severe *rectal tenesmus, small injections of one or two ounces of ice-water* are of value. Or the *insertion of small pieces of ice will relieve*; or, of course, *a suppository of morphin may be used.*

If one believes that bismuth administered by the mouth will *medicate the colon in any soothing way*, he *may give the subcarbonate of bismuth in 1 gram (15 grain) doses, at two, three, or four hour intervals.* Very large doses have been recommended, but smaller doses frequently repeated are probably of as great advantage. However, as just stated, *unless there is coincident small intestine inflammation, it seems perfectly valueless to give bismuth by the mouth for sedative effect in the colon.*

If there is fermentation in the small intestine, and there is no congestion of the kidneys, salol, given in 0.20 gram (3 grain) doses as a dry powder or as a dry powder in a capsule, once in from four to six hours, will prevent such fermentation.

As above stated, morphin should be given in sufficient doses to give the patient more or less intestinal rest. Whether or not this morphin is combined with atropin depends on the frequency of its administration. Atropin should not be repeated so frequently as morphin may need to be. Also, if there is any idiosyncrasy to atropin it, of course, should not be repeated.

If the pain is not severe and the frequency of the movements not great, and the stomach is in good condition, instead of administering morphin hypodermatically, a small dose may be administered by the mouth, *or codein or the tincture of deodorized opium* may be substituted and given by the mouth.

Various external applications to the abdomen are often useful. These may consist of hot flannel applications, dry or moistened with a small amount of alcohol or turpentine. Sometimes a hot water bag, partially filled and not too heavy, is agreeable to the patient. At times, *a counter-irritant action* as produced by a weak mustard paste composed of three parts of flour or linseed meal with one part of mustard is useful; or a hot flaxseed *poultice may give considerable relief from intestinal pain.*

One would be guilty of neglect who left this subject without saying a few words in regard to the prevention of the spread of the disease. As the bacilli which cause the disease are found in the feces, it is very necessary that great care should be used in disposing of these as they come from the patient. They should be disinfected with equal, if not greater, care than the fecal discharges from typhoid patients. Any *clothing*, either personal or connected with the bed, which becomes contaminated with fecal discharges, should be disinfected and boiled before it is handled.

It has been found that some patients who have had dysentery retain the ability to disseminate the bacilli long after the acute symptoms have passed away, as do some patients who have passed through an attack of typhoid fever. These individuals are called dysentery carriers. It has been found that these patients are chiefly those who have ceased treatment early during convalescence and who have never completely recovered from the disease, but who have been subject to relapses at more or less frequent intervals after passing through the acute stage of the disease. This indicates the urgent necessity of keeping convalescents from dysentery under close observation and careful treatment until they have thoroughly recovered, and of impressing on the patient the necessity of taking care of himself and preventing any possible relapse.

(*To be continued*)

TREPHINING FOR APOPLEXY

JOHN D. MILLIGAN, M.D.
PITTSBURG

There has never been a time in the history of man when certain morbid conditions affecting both sexes were not classed as incurable. The list grows less, however, and there is every reason to believe that by careful and patient work an epoch may yet be reached when we may be able to successfully attack many, if not all, of these affections with reasonable hope of retrieving the sufferer and restoring him to the normal.

Until recently, among these conditions much was left to medicine alone, but the list is growing less by the intervention of the art of surgery, which has reduced the list very materially.

Prominent among those of frequent occurrence is hematocele of the brain (apoplexy) due to rupture of Charcot's "artery of cerebral hemorrhage," accompanied by hemiplegia, aphasia, etc., producing pressure symptoms rather than destruction of brain tissue. We know that if we can remove this morbid focus, we shall relieve the pressure symptoms, and restore the condition to the normal.

Shall we sit idly by and trust to have absorption take place with the result that a brain scar or an unabsorbed brain cyst may remain, and the patient have hemiplegia and aphasia for life? Were this a case of intestinal perforation or rupture in tubal pregnancy, or injury to the heart itself by stab or other wound, the promptness of the surgeon's activity would decide the fate of the patient. And with the now established success of the various operations which even in our short lives have become standardized, shall we stop and debate the question as to whether we shall trephine and remove the clot? Reasoning that in the hematoma of the brain the first seventy-two hours is likely to decide the fate of the apoplectic, granting that he survives the shock, the patient will be found generally in better condition for operation than the patient in the usual case of traumatism of the head. The clot has already become firm and the serum has fairly well separated; the likelihood of further hemorrhages is lessened; the ruptured vessel has been well plugged, and the clot will not be detached without careless handling. Each day thereafter for a limited time, say ten days from the attack, it is still more favorable, and the surgeon can elect the time for operation. As the technic improves, and as the proper time to operate becomes more definitely known, the percentage of fatal cases will become less.

CASE REPORT

History.—E. N. S., freight conductor, aged 42, right-handed, was in the act of stepping from the step of the engine to the ground at Ellwood Junction, May 12, 1909, about 12:50 p. m., when he fell in a heap and rolled over. As the tender passed, it was believed that he was struck by the axle box on the right temple. He was picked up and found to be unconscious, and was at once taken to the Beaver Valley General Hospital, Rochester, Pa., and came under the care of Dr. J. S. Louthan and Dr. R. M. Patterson, of Beaver Falls, Pa. This was 3 p. m., May 12, 1909.

Examination.—The following symptoms were present: The patient was semicomatose, could be roused with an effort, but was incoherent, with aphasia and hemiplegia of the left side present. A slight redness, not even sufficient to be classed as a contusion, was found on the scalp above the ear on the right side and no other marks of injury; sphincters were relaxed, and urine voided unconsciously; stupor increased, with stertorous breathing; following along for three or four days, there was some muttering delirium. The patient made many attempts to get up, or rather to roll out of bed, but was restrained easily. The Babinski sign was present in the left foot; vision affected; hemianopsia present. No fracture of the skull could be found. I saw him with the other physicians May 16, 1909.

Eleven days after the patient was admitted, May 23, 1909, no improvement of any importance having occurred, a careful review and consultation was held and the consensus of opinion was, that there was either a hematocele of the brain (apoplexy) or a clot from the middle meningeal artery; but all agreed that the lesion was in the motor area and that the Rolandic fissure was the site of the lesion. This was concurred in by Drs. J. H. Wilson, Beaver, Pa., J. S. Louthan and R. M. Patterson, Beaver Falls, Pa. It was decided to operate.

Operation.—The operation was done May 23, 1909. The skull was opened with a trephine and careful inspection of the dura was made without finding anything. The wound was then enlarged and the fissure of Rolando was found to present beneath the membranes a slight bulging, which on opening through the membranes, poured out about ½ ounce of clear serous fluid. Further investigation disclosed a small thread clot. The surrounding portion of the brain was carefully pushed aside with a probe and the handle of a scalpel and a pear-shaped clot was removed and the cavity wiped out carefully. At about the location of Charcot's "artery of cerebral hemorrhage" was found a small firm clot adhering to the side of the cavity, which was carefully left. A small wick of iodoform gauze was placed as a drain and the wound carefully closed and antiseptically dressed. The drain was removed on the fourth day and the wound healed without any symptoms.

E. N. S., trephined for apoplexy; from photograph taken March 23, 1911, twenty-two months after the operation and sixteen months after resuming his duties as a freight conductor.

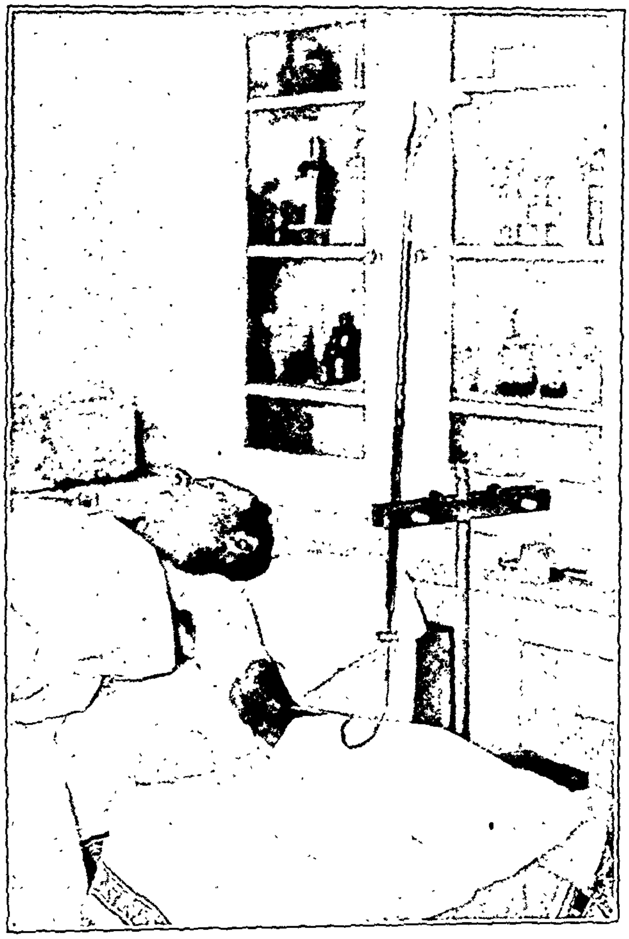
Result.—After the operation there was slow improvement for the first week and then improvement was more rapid, the patient regaining consciousness June 6, 1909, twenty-five days after the accident and fourteen days after trephining. Paralysis was first to disappear in the left leg, then the arm. The Babinski sign was not observed after the end of the first week. Aphasia slowly disappeared by the time he left the hospital.

The hemianopsia was present for some time, and after examination Dr. Robeson reported that the apparent atrophy due to pressure was likely to remain for a long time. But improvement was steady and at the end of six months the patient had been restored to perfect vision. He was in the hospital fifty-nine days and went back to work Nov. 23, 1909, six months after the operation, and has been continuously at work ever since. He had no recollection of anything from 10 p. m., May 11, 1909, which was about fifteen hours before the accident, until June 6, 1909, which was twenty-six days.

A SIMPLE TECHNIC FOR SALVARSAN INJECTION *

MATHEW A. REASONER, M.D.
Captain, Medical Corps, U. S. Army, Vancouver Barracks, Wash.

The following technic for preparing and injecting salvarsan has been followed to date (April 25) in twenty-seven intramuscular and forty-four intravenous injections in forty-seven cases, mostly in the military service. There will be required two, or better three, 50-c.c. glass cock burettes and stand, 10-c.c. glass syringe for intramuscular use, and large and small flasks as indicated. The other accessories will be found in the well-equipped office or dressing-room or may be improvised.



Position of patient in intravenous injection.

The burettes are wrapped in gauze and sterilized in the kitchen oven, keeping a gauze stopper in the open end. The other articles that require it are sterilized according to the means at hand. The sodium hydrate solution should not be heated but prepared under aseptic precautions. A 50-gm. specific gravity flask with solid glass stopper and containing glass beads is used for dissolving and titrating as a mortar or other open vessel is more or less of an invitation to infection. Hot water should not be used in dissolving the powder, as it is an unstable compound which depends for its efficiency on this unstable formula and it is certainly not logical to provoke chemical action by applying heat. Dissolving in water at room temperature, the entire procedure of an injection need not take over one-half hour.

The alkaline solution is preferred for both injections; it is dissolved in 10 c.c. sterile water with constant rotary motion of flask and titrated slowly with normal sodium hydroxid solution, using same motion, carrying it just beyond the faint orange red tint to the point at which only one or two minute flocculi remain. No acid is used nor has litmus or phenolphthalein been found necessary since the first few times. As the sodium hydrate solution is not stable, dependence cannot always be placed on using a definite quantity of this solution. The titrated solution is diluted with sterile normal salt solution (physiologic) to 20 c.c. for intramuscular injection and about 250 c.c. for intravenous use. Should the latter solution not remain clear, a few more drops of sodium hydrate solution will be required.

Capt. R. H. Pierson, Medical Corps, U. S. A., has most kindly assisted in the intravenous injections, using his method, which I have not seen otherwise described. The patient is placed as shown in the illustration; tincture of iodin is applied to the flexor surface of the forearm; a tourniquet is placed above the elbow and with an ethyl chlorid spray the selected vein is frozen to the skin (better one away from the exact bend of the elbow), when no difficulty or pain is ordinarily experienced in passing a 3-inch 17-gauge needle directly into the vein. Without freezing the vein may evade the needle. Blood flows from the needle when the vein is entered and with the salvarsan or salt solution flowing gently from the small rubber catheter attached to the burette, the connection is established, the tourniquet is removed and the warmed solution is allowed to enter in from five to ten minutes. The burette should have been previously warmed.

Cutting down on the vein is a more painful and tedious process, the point of incision remains tender longer and following the manipulation and ligation it would seem that there is more possibility for untoward results. The solution should not be brought into contact with the subcutaneous tissues or healing will be delayed. Following this injection the patient is caused to lie down for a few hours and is returned to duty the following day. In this manner 0.5 to 0.6 gm. doses have been given with no ill effect throughout this entire series. Reactions may be expected in a certain number, and consist of malaise and even chills, fever, vomiting or diarrhea but will pass away in four or five hours. Others show no after-effects. Urticaria has appeared two times during injection and lasted two hours. The blood-pressure should not be high from recent exercise, and with marked arteriosclerosis some attention should be previously paid the matter of blood-pressure.

The intramuscular injections should be made slowly and with all aseptic precautions in the upper and outer parts of both gluteal regions. The reaction appears later and may last longer. The average time in bed for twenty-four patients was five and one-half days. It would be somewhat less in civil life. The patient should stay in bed until the local reaction has subsided. In the seventy-one injections to date only one untoward result has occurred and that among the intramuscular series. A woman went to her home and on the third day rode a long distance in a wagon over rough roads and bruised the buttocks. One abscess developed, which was very slow in healing.

It is not believed that either of the two methods should be used to the exclusion of the other and both should frequently be used on the same person. The Wassermann reaction will indicate the necessity for repeated injections.

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* Portion of paper delivered before Portland City and County Medical Society, April 5, 1911, Portland, Ore.

THE HOME OF THE ASSOCIATION

A BRIEF HISTORY OF THE MATERIAL PROGRESS OF THE ASSOCIATION AND ITS PLANT

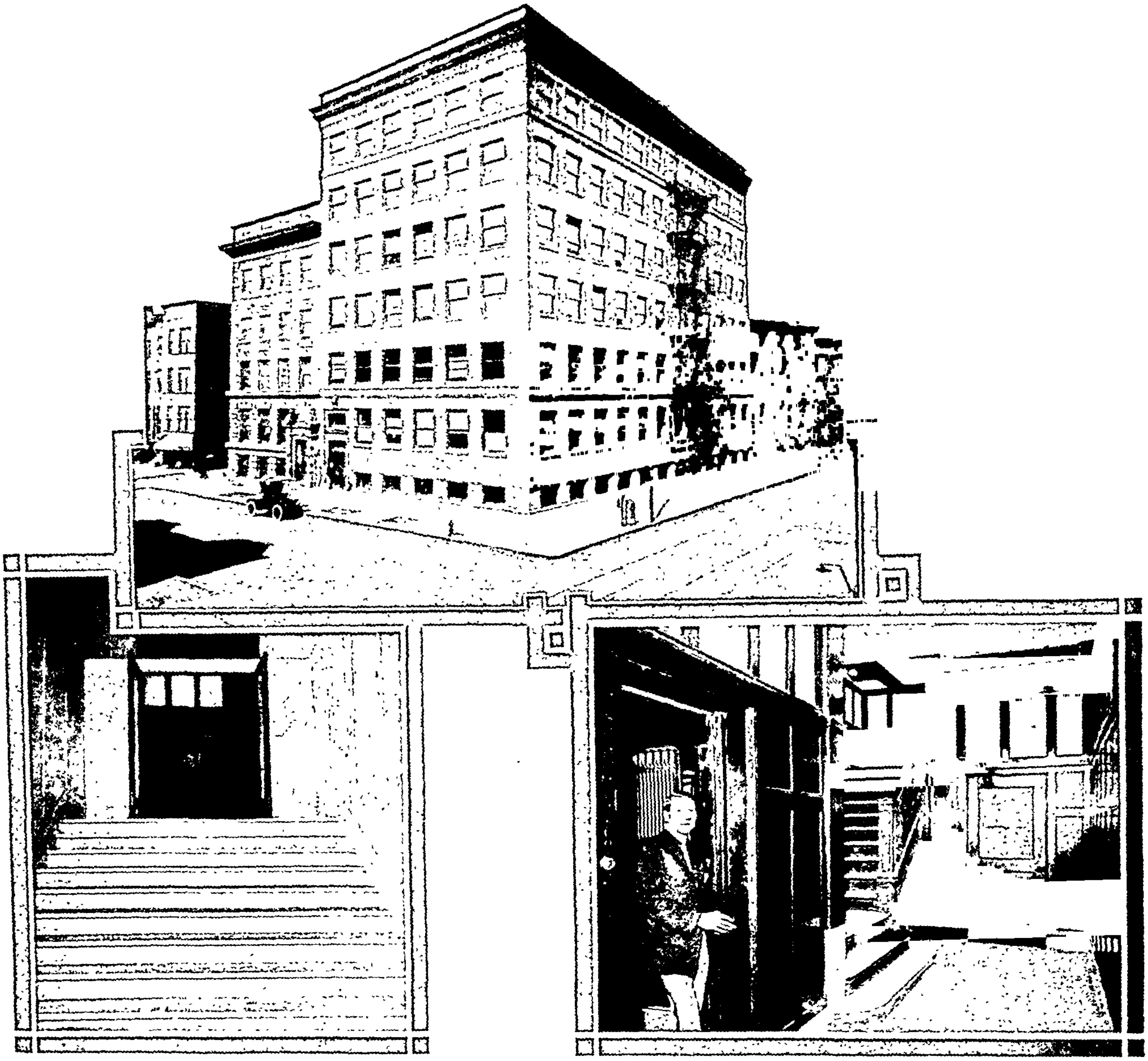


Fig. 1.—View of the Association buildings. A comparison of the new and old buildings will give a slight indication of the growth of the work of the Association. Fig. 2.—The vestibule with the marble stairway and wainscoting. Fig. 3.—The main hall on the first floor, showing the passenger elevator, the stairway and the door to the printing department. Through this door all employees of *the mechanical department enter; access is had through it to the composing-room on the second floor, to the bindery on the first floor and* to the pressroom in the basement. The mechanical department is thus completely separated from the business and editorial departments.

CHAPTER IV.—THE EQUIPMENT

The story of "The Home of the Association," three chapters of which were printed last fall, was discontinued on account of delay in the completion of the new building at the time set. The building was practically completed and ready for occupancy in January last, when the commencement of the transfer of the plant was made; this transfer was completed in February.

In the last article, published Nov. 12, 1910, the important structural features of the new building were described, although some of the features had not been mentioned.

The building, as completed, is fire-proof, and sufficiently strong to support practically any weight that may be placed on any floor. Fire protection for the contents is provided by standpipes running from the basement to the roof, with connections on every floor, to which is kept attached fire hose sufficient to reach any part of the floor, ready for instant use by anyone. There are both front and back stairs, each absolutely fireproof. The front stairway is made of marble, slate and steel; the back stairway of steel and concrete. The doors and windows leading from both front and back-stairways are of wire-glass and metal, no wood whatever being used.

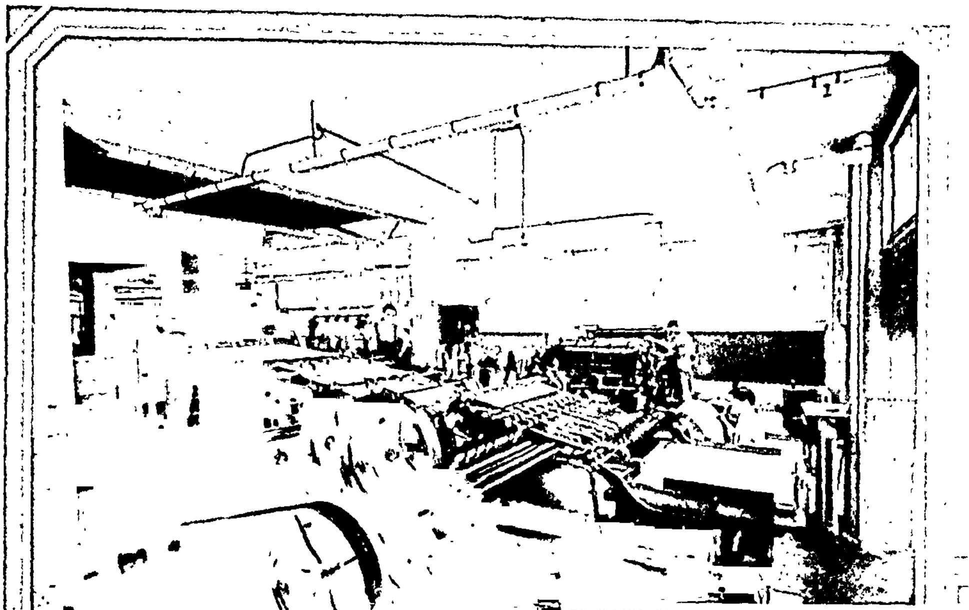


Fig. 4.—A view of one corner of the pressroom, showing flat-bed perfecting press in the foreground.

One enters the building (Fig. 1) through a terra-cotta doorway in the northwest corner of the Dearborn avenue front, and finds a beautiful white-marble vestibule and stairway (Fig. 2). From this one enters the main hallway (Fig. 3) in which is the passenger elevator and from which starts the main stairway to the floors above.

In this main hall, also, is the "employees' entrance" leading into another hall from which entrance is made to the bindery and mailing room on the first floor, to the composing and stereotyping rooms on the second floor, and to the press-room in the basement. In this way the mechanical or printing department is completely separated from the office part of the building.

Basement

PRESSROOM

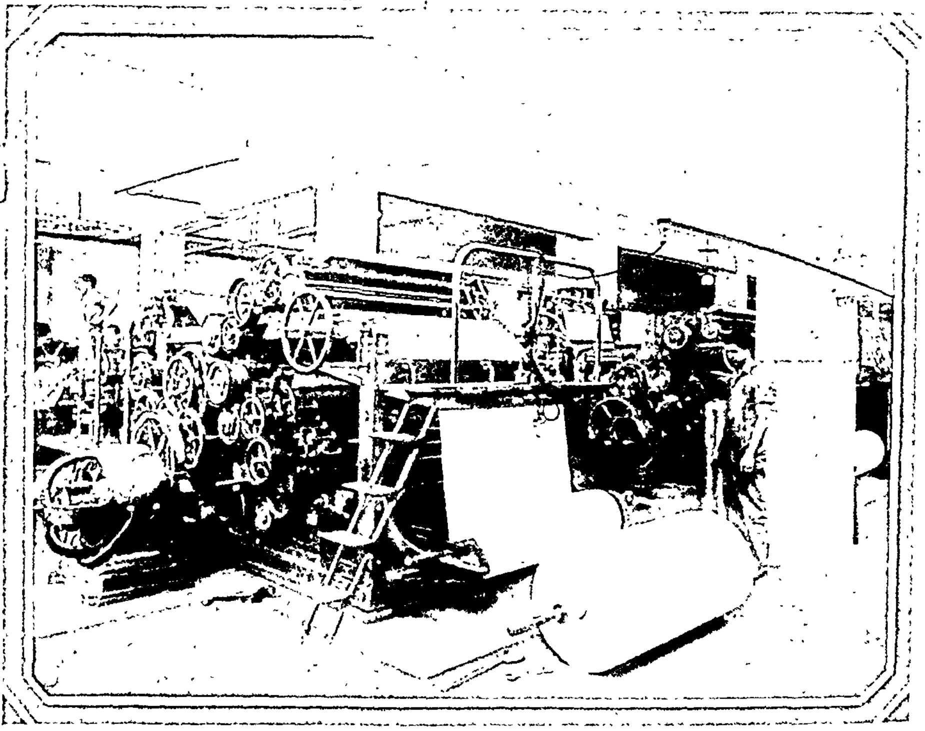


Fig. 6.—One of the two magazine cylinder presses; each will print and fold 5,000 thirty-two-page signatures an hour, or 10,000 sixteen-page signatures.

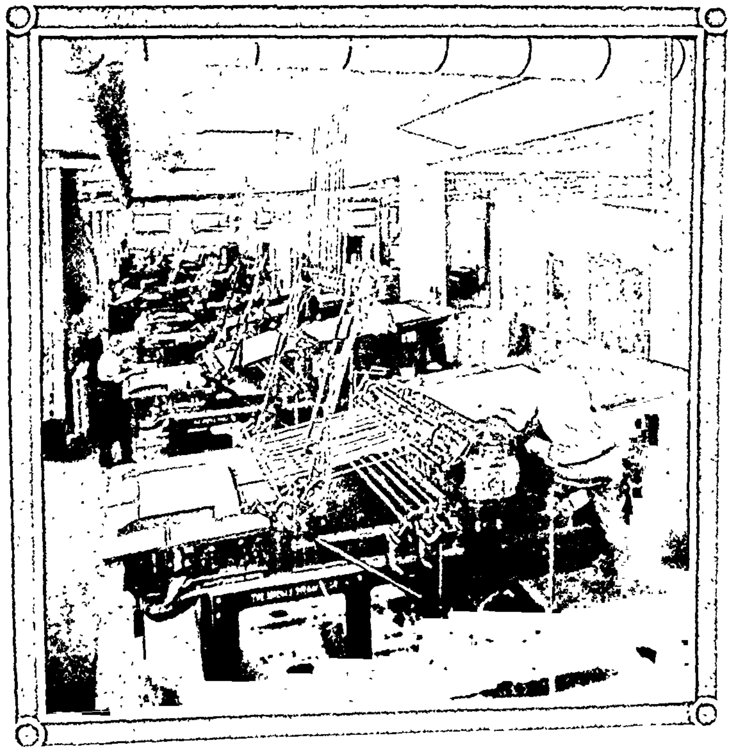


Fig. 5.—View of the east end of the basement, showing the row of cylinder presses for reprint and pamphlet work.

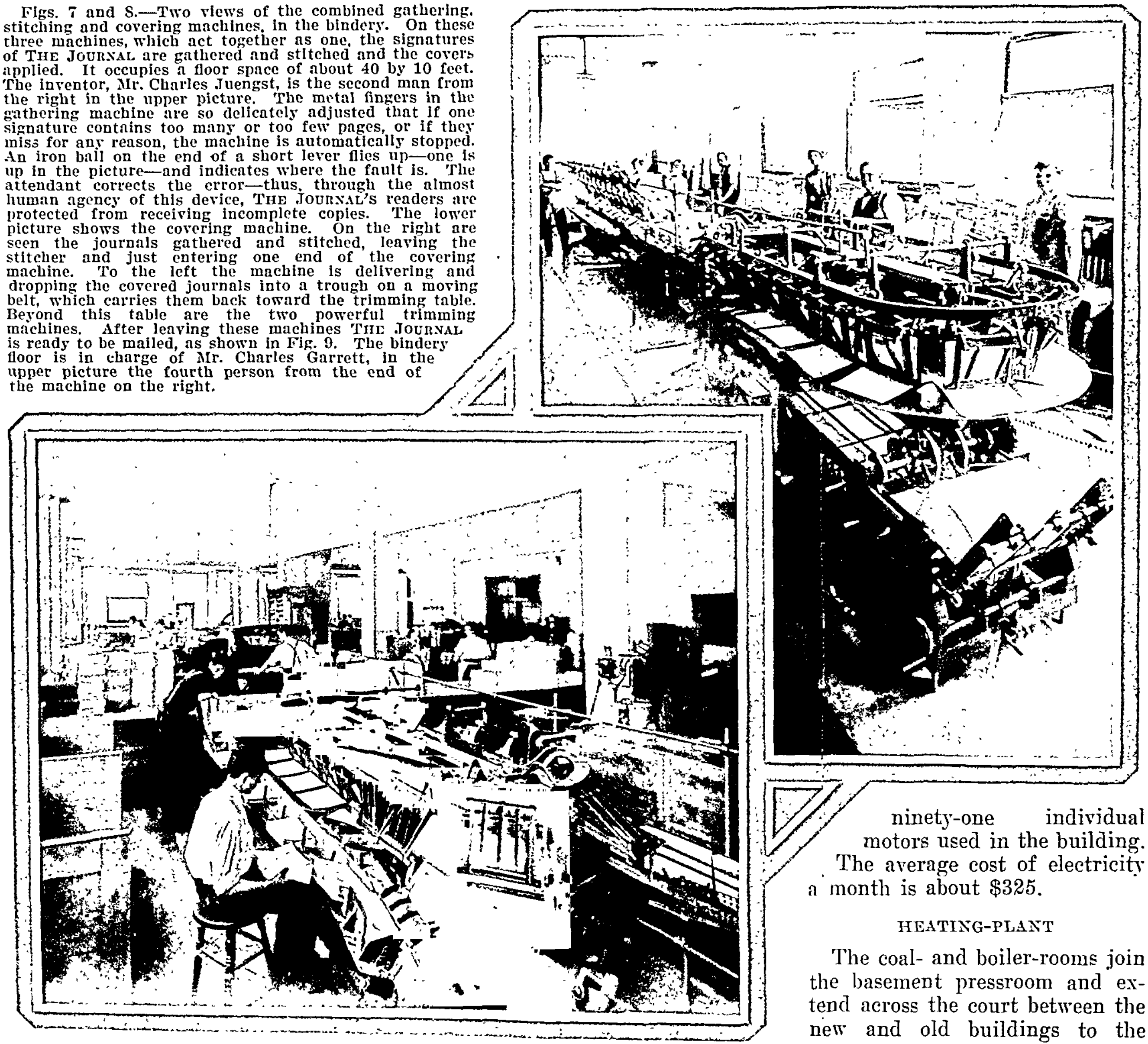
The pressroom is the largest room in the building, since it includes space underneath the sidewalk on the west and south. The floor area of this room, exclusive of the boiler- and coal-rooms, is 80 by 140 feet. The ceiling is 14 feet high. Mr. Frank Counihan is in charge. The room is splendidly lighted; in fact, it is the best-lighted pressroom in the city, if not in the country. In this pressroom there are eight large presses. Two of these are rotary perfecting presses (Fig. 6), and one is a large flat-bed perfecting press (Fig. 4), each of which prints thirty-two Journal-size pages at a time. In addition there are five ordinary cylinder presses (Fig. 5). The flat-bed perfecting press, mentioned above, was the first large press bought and was considered, at the time—ten years ago—as being quite an advance in our equipment. Attached to it is an automatic feeder; it will print from 1,500 to 1,800 thirty-two-page signatures (that is, sheets which will be folded to make that number of pages) an hour.

The two most important additions to the pressroom are the rotary presses. One of these was bought about five years ago. The other has just been installed. Each of these presses prints and folds 5,000 thirty-two-page signatures an hour, or 10,000 sixteen-page signatures an hour. The new rotary press is the most perfect of its kind. Formerly, half-tones and fine illustrations had to be printed on flat-bed presses; now this kind of work can be done on the new rotary press.

The sizes of the sheets that can be printed by the five cylinder presses vary from 26 by 41 inches to 37 by 53 inches. Each of these will print from 1,800 to 2,000 impressions an hour. They are hand-fed.

In addition to these presses there are three platen presses on the second floor (Fig. 18). On these are printed the smaller pieces of work, such as stationery, record cards, small circulars, small reprints, the covers of reprints and pamphlets, etc.

In one corner of the pressroom is an electroplating plant. Here the stereotyped plates, after they come from the stereotyping room, are plated with nickel. The stereotyped plates have a soft face and are good for only about 20,000 impressions; by nickel-plating them, the type-face is hardened so that 100,000 impressions might be made from them.



Figs. 7 and 8.—Two views of the combined gathering, stitching and covering machines, in the bindery. On these three machines, which act together as one, the signatures of THE JOURNAL are gathered and stitched and the covers applied. It occupies a floor space of about 40 by 10 feet. The inventor, Mr. Charles Juengst, is the second man from the right in the upper picture. The metal fingers in the gathering machine are so delicately adjusted that if one signature contains too many or too few pages, or if they miss for any reason, the machine is automatically stopped. An iron ball on the end of a short lever flies up—one is up in the picture—and indicates where the fault is. The attendant corrects the error—thus, through the almost human agency of this device, THE JOURNAL'S readers are protected from receiving incomplete copies. The lower picture shows the covering machine. On the right are seen the journals gathered and stitched, leaving the stitcher and just entering one end of the covering machine. To the left the machine is delivering and dropping the covered journals into a trough on a moving belt, which carries them back toward the trimming table. Beyond this table are the two powerful trimming machines. After leaving these machines THE JOURNAL is ready to be mailed, as shown in Fig. 9. The bindery floor is in charge of Mr. Charles Garrett, in the upper picture the fourth person from the end of the machine on the right.

In the basement is the storage-room for paper. To print THE JOURNAL and the various other publications, nearly twenty-five tons of paper are used each week, the weekly issue of THE JOURNAL alone averaging about twenty-two tons. Special numbers require much more; the Los Angeles number, for instance, required over forty-two tons of paper. Of course it is necessary to be prepared for strikes, railroad wrecks, and other troubles by keeping in stock a fairly good supply of paper; this requires considerable storage room. The amount of paper kept in stock varies between fifty and one hundred tons.

ELECTRIC POWER

Electric power is used to run the machinery and is supplied by a public lighting-plant. Each press and machine and elevator has its own motor. There are ninety-one individual motors used in the building. The average cost of electricity a month is about $325.

HEATING-PLANT

The coal- and boiler-rooms join the basement pressroom and extend across the court between the new and old buildings to the alley. The floor of the boiler-room is depressed ten feet below the level of the basement floor and contains two sixteen-foot high-pressure tubular boilers with a capacity sufficient for heating both the new and old buildings. In addition there is a smaller high-pressure boiler for supplying live steam to the stereotyping and other rooms. In this sub-basement are also the water-filtering and cooling system, which has recently been installed, the boiler-feeding pumps, the summer heating-plant, etc. The coal-bins are ample to accommodate 175 tons of coal, and are in close proximity to the battery of boilers.

First Floor

BINDERY AND MAILING ROOM

The bindery and mailing-room occupy the first floor. The machinery in this room (Figs. 7 to 11) will show that the Association is well equipped for doing this branch of the work. Among the interesting pieces of machinery is a group of three machines (Figs. 7 and 8) connected and working together as one, on which the "forms" making The Journal are gathered together into one book, stitched and covered. This machine includes the gathering-, the stitching- and the covering-machines. The gathering-machine is a long one, on which the various printed signatures of the publication to be bound are placed in consecutive piles. When the machine is set in operation a device which acts very similarly to the human thumb and finger reaches out and grasps a signature from the bottom of a pile, drops it onto a moving belt and, as it passes on, the succeeding sections are dropped on it, each in its proper place; when the end of the machine is reached all of the sections of The Journal have been gathered together; each group passes on directly to the stitching-machine, which inserts the three wire staples. Without stopping in its forward movement, The Journal, now stitched, but coverless, travels on to the covering-machine, which applies the glue to the back, presses on the cover, counts and delivers it (Figs. 7 and 8), complete except for trimming, on a rack, from which it is removed by hand and placed on the trimming-table. This combined machine will gather, stitch and cover 4,000 books an hour, equaling the work of between forty and fifty people. This combined machine was the invention of one man. He first developed the gathering-machine, then the stitching-machine, and combined the two. This gathering- and stitching-machine was bought by the Association about five years ago and was one of the first made. The covering-machine was only recently invented and has just been obtained.

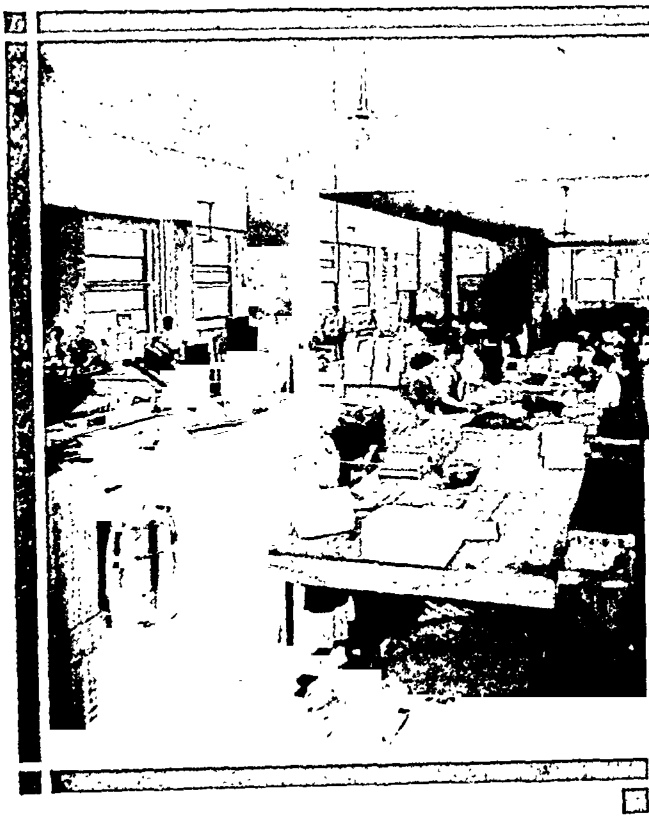


Fig. 9.—The mailing division of the bindery. Copies of The Journal are being wrapped and placed in mail sacks. About 900 mail sacks are used each week.

The only thing remaining to complete The Journal for mailing (Fig. 9) is the trimming of the edges.

Among the other machines in this room are two power paper cutters (in the background, Fig. 7), four folding-machines (Fig. 10) each having a capacity of 2,500 sheets an hour, one "smashing"-machine, two wire stitching-machines, one thread sewing-machine (Fig. 10), and proof-presses on which are printed the nine hundred galleys constituting the mailing-lists of The Journal, the *Archives of Internal Medicine* and the *American Journal of Diseases of Children*. An average of nine hundred sacks of mail are shipped from this room each week.

Second Floor

The main portion of the second floor (Figs. 12 to 17) is occupied by the composing-room with its advertising, job, book and journal departments, with the linotype machines, job presses and the cases for hand setting, proof-presses, etc.

In the southwest corner of this floor are three well-lighted rooms for the use of the six proof-readers and copyholders. In the southeast corner is the stereotyping room (Fig. 12) where the type, after it is put in forms, is used to cast stereotype plates. Among the machines in this room are melting-kettles, flat and circular casting-boxes, various saws, bevelers, planers, finishing- and trimming-machines; in short, a thoroughly up-to-date, perfect stereotyping plant.

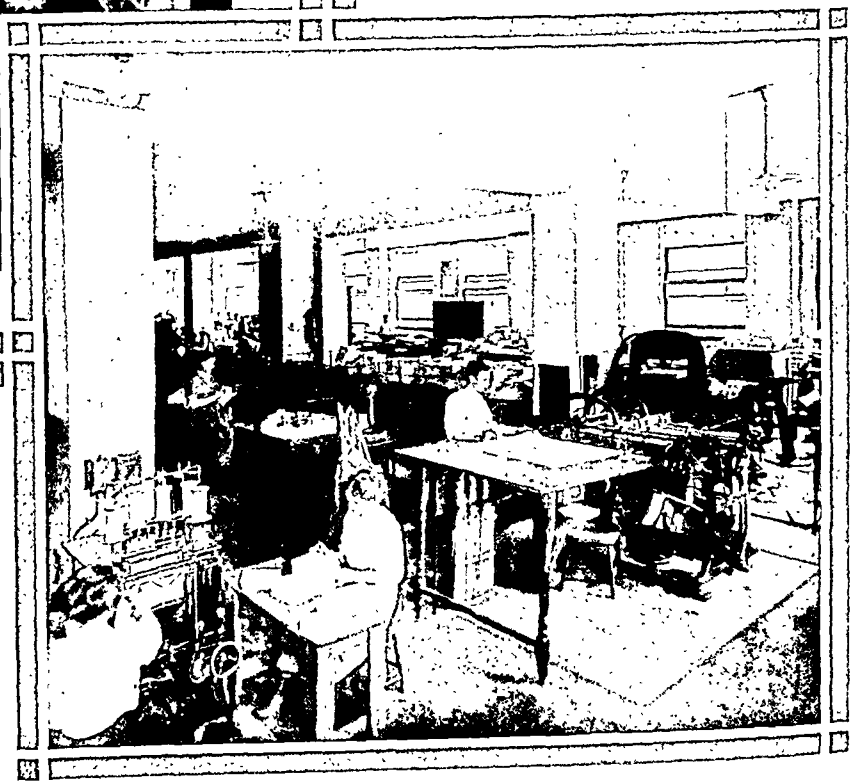


Fig. 10.—Another view of the bindery. In the immediate foreground at the left is a sewing-machine which, when the picture was taken, was sewing together the Official Program for the Los Angeles session. To the right are the folding-machines which fold the sheets that are delivered from some of the presses. Some of the folding-machines are automatically fed, a process that always interests visitors.

There are six linotype machines, but as there are certain kinds of typesetting that cannot be set on these machines, this is done in the old-fashioned manner by hand. There are twelve make-up stones on which the type is assembled and the pages made up into the forms. Three job presses occupy an alcove (Fig. 18) in this room as stated elsewhere.

With the periodicals, the reprints, the various books and other publications printed by the American Medical Association, this is a very busy department and already is crowded for room.

Third Floor

Stepping from the elevator on the third floor, the visitor enters the reception room in which he finds chairs and tables, a telephone, writing materials, directories, copies of the publications of the Association, and some current magazines. Here, at a convenient window, one may pay dues and subscriptions, or purchase publications and transact other business with the cashier's department. At another window is the telephone operator and information clerk, who answers questions, calls members of the editorial staff to the reception room to greet visitors, makes appointments for interviews, etc.

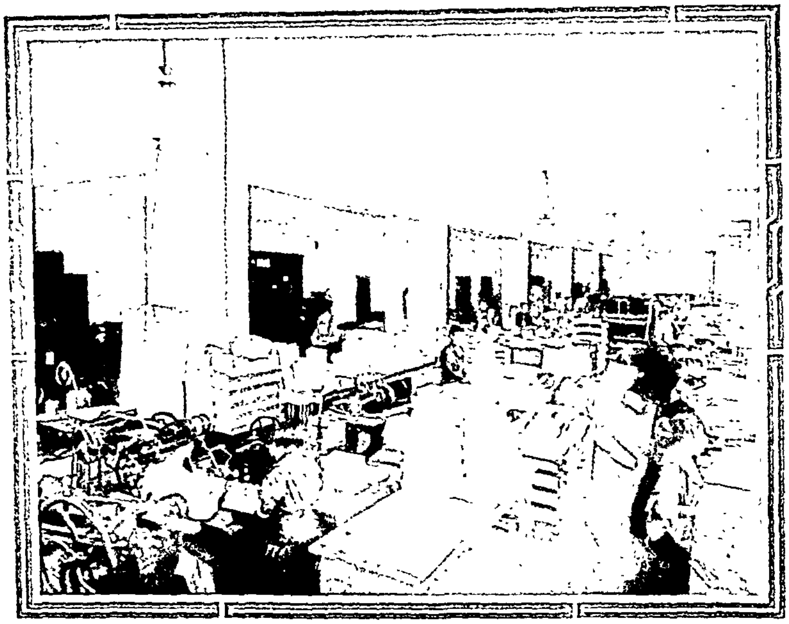


Fig. 11.—General view of the bindery.

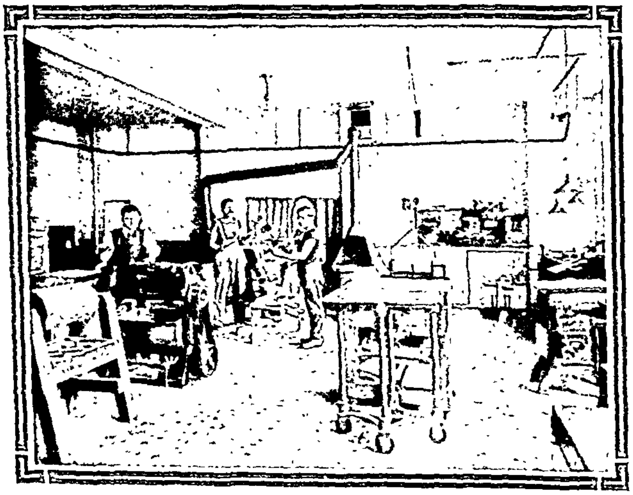


Fig. 12.—A portion of the stereotyping-room with its various machines for making the plates from which THE JOURNAL is printed.

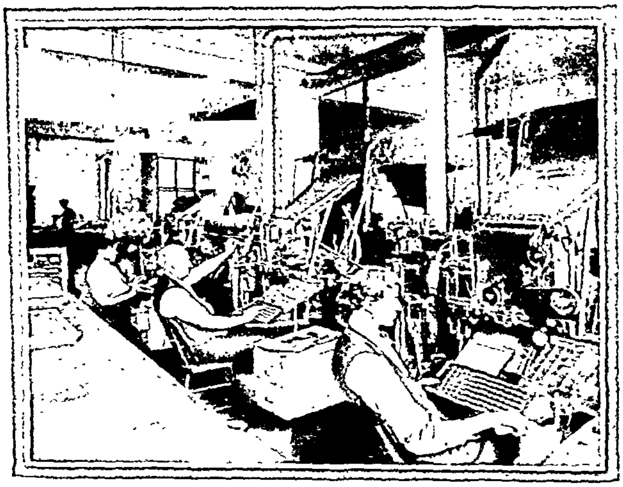


Fig. 13.—A view of one end of the composing-room showing three of the six linotype machines. The three others are just behind these. Some of these machines run both day and night, according to the press of work at various seasons.

EDITORIAL AND BUSINESS OFFICES

Adjoining the reception room is a suite of editorial offices (Fig. 19) and the office of the manager of the advertising and subscription department (Fig. 28). The main part of this floor is occupied by the subscription, membership, advertising and accounting departments (Figs. 24, 25, 28-31). The last occupies a large space, divided off by glass partitions. There is a special billing typewriter, an electrically operated adding machine, a burglar-proof safe, and a commodious fire-proof vault filled with filing cases and other conveniences.

The membership department maintains a card index of the membership of the Association, and closely associated with it is the subscription department. Here are card index files of the subscribers to THE JOURNAL, the *Archives of Internal Medicine* and the *American Journal of Diseases of Children;* also mailing-lists of the entire circulation of the various publications are kept in this department and are gone over each week, additions and eliminations being made.

Advertising copy is also prepared and edited in this room. There are the usual cloak and toilet-rooms, and a stationery storage-room, steel lockers for the clerks, desks, typewriting machines, etc. The telephone switchboard connects each room in the building with the city and long-distance systems.

COUNCIL ON HEALTH AND PUBLIC INSTRUCTION

On this floor is the room of the Council on Health and Public Instruction. This Council has charge of work that, until 1910, was divided among several standing and special committees. Here is preserved all material on questions of hygiene and sanitary science and on all questions regarding the relations of the profession to the public and to legislation. Pamphlets and reprints of interest to the public are prepared and sent out under the direction of this Council. State and federal laws and court decisions regarding public health matters, reports of state boards of health, bulletins and pamphlets issued by state boards, etc., are secured and preserved for reference. A press bureau sends out bulletins on medical and scientific questions to newspapers and magazines. This Council is preparing a series of public health pamphlets and it hopes in the near future to be able to supply lists of speakers, stereopticon slides, moving-picture exhibits and other means of public health education, for the use of societies.

Fourth Floor

On the fourth floor are the Council on Medical Education and its subsidiary directory and biographic departments, the exchange and abstract room, the manuscript-editing room, the propaganda department and the office of the assistant to the secretary.

EDUCATIONAL DEPARTMENT

Licensed Physicians.—During the last seven years reports have been regularly received from the various licensing boards throughout the country, on blanks prepared for the purpose. These reports are bound in a book at the end of each year so that at the present time there are seven books, each containing the official data regarding physicians registered by all the licensing boards of the country. In addition to these files a complete list of those previously licensed was obtained from each state. Thus here may be found a fairly complete list containing the record of every man licensed in every state of the Union, so that in the case of the destruction of the records of any state by fire or otherwise, the American Medical Association would be able to supply the loss.

Medical College Graduates.—The Council has also received each year reports on those who have graduated from the various medical colleges of the country. These reports are also on blanks furnished by the Council, and are kept in book form, one book for each college year. In addition to these reports the Council obtained complete lists of their alumni from all the existing colleges, and also from the majority of the colleges which have long since been extinct, comprising, therefore, fairly complete files of the graduates of the medical colleges of the country. The Council thus has an official record regarding all graduates of existing medical colleges and of the majority of the graduates of colleges long since extinct; in fact, from these data the Council is in a position to verify the credentials of practically every college graduate, in case the records of his alma mater should be destroyed by fire or otherwise.

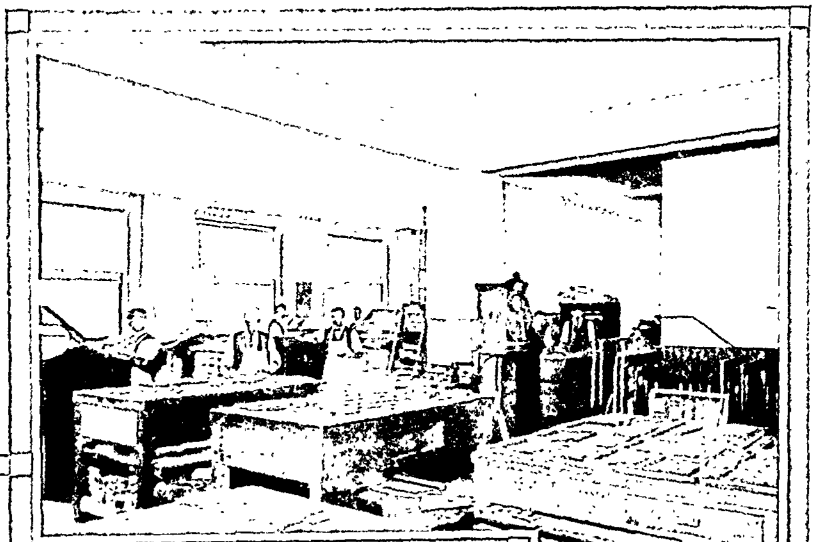


Fig. 15.—A view of the composing-room, showing several of the twelve make-up stones in this room, and that portion of the room containing the hand-set cases.

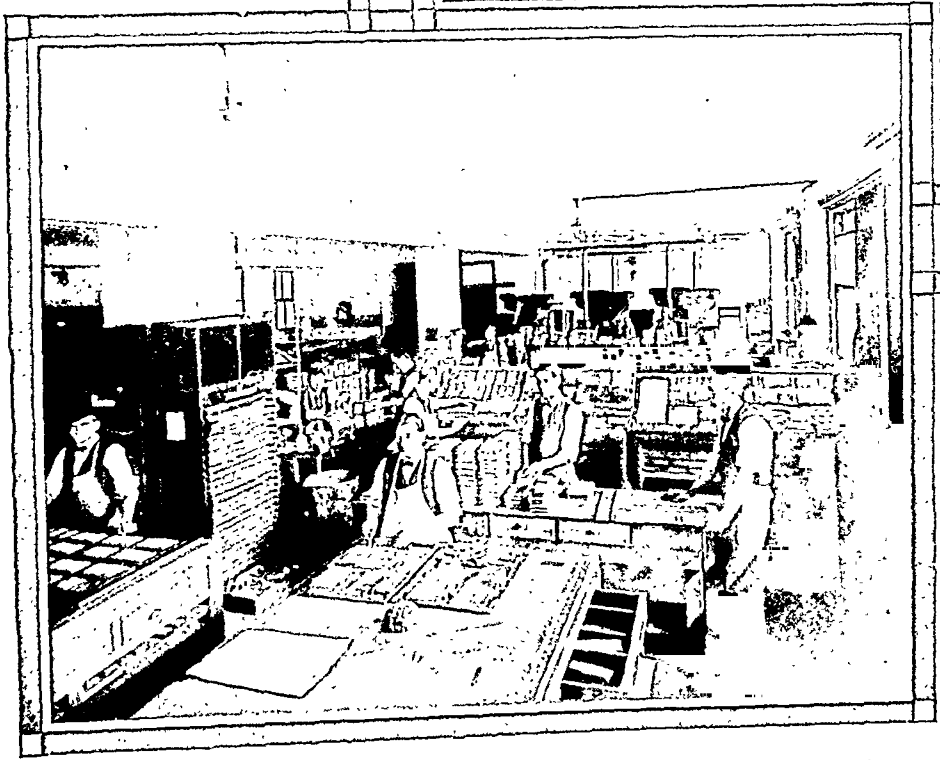


Fig. 14.—View of main portion of the composing-room, with the linotype machines in the rear. The make-up stones contain piles of type pages, and others made up into page forms, one of which is just being "locked up."

The information contained in these files has been secured from official sources in every instance and some of it at considerable expense. For instance, in order to obtain a complete list of those licensed to practice medicine in Pennsylvania, it was necessary to send to the prothonotary's office of every county in the state and have the records copied. The fact that a large majority of the colleges organized during the last twenty-five years are now extinct proves the importance of these permanent records kept by the Council. Medical schools come and go, and when they go, very often their records go too.

The Biographic Card Index.—In addition to the official data regarding licensed physicians and medical college graduates, the Association now has an alphabetically arranged, biographic card index of practically all the physicians in the United States. The information contained on these cards is based on official information so far as the graduation and licensing are concerned. The other information has been supplied by the physician himself. The information on these cards is constantly becoming more and more complete, since there is added to them day by day any information relating to the individual which may be received. These cards show not only where a physician may have been located in the past, provided he has had more than one location, but also other information of importance to the individual physician, as well as to the profession at large.

Of course, the initial expense of establishing these files of valuable data has been rather heavy; but to maintain them will be little more than a matter of ordinary department routine. Each year a card is prepared for every new graduate and the information regarding him is added to from year to year. In like manner, it becomes easy to add the data regarding licensing, etc.

This year the Council on Medical Education is securing the names of medical students from all the colleges which will cooperate—about a hundred at the present time. Hence, the physician hereafter will have a card before he graduates. and it is hoped that in the near future the record of every physician may be kept in this biographic index from the time he enters the freshman year. A record such as this is kept of every medical student in nearly all European countries.

THE AMERICAN MEDICAL DIRECTORY

The information referred to above is entirely independent of, but at the same time forms the basis for, the information published in the American Medical Directory. For the directory an additional card index has been prepared. This card index, however, is arranged geographically. With these cards changes of address are easily made by simply removing a physician's card from one town and placing it under the town to which he removes. These cards constitute the copy for each subsequent edition of the directory. It is always ready and can be sent to the compositors to be put in type on a moment's notice.

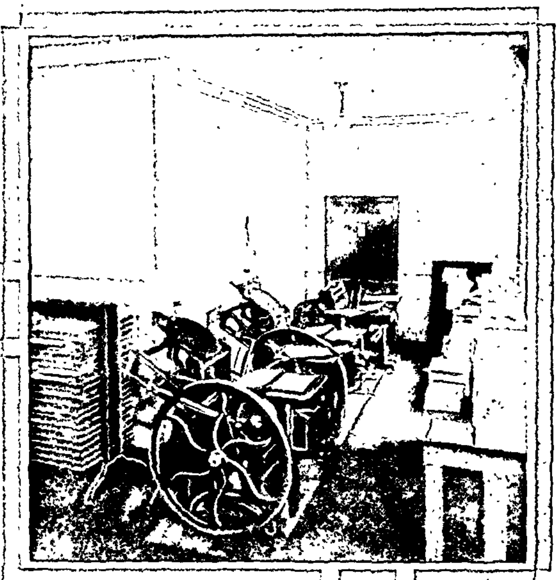


Fig. 18.—An alcove in the composing-room showing the three platen presses for printing stationery and other small jobs.

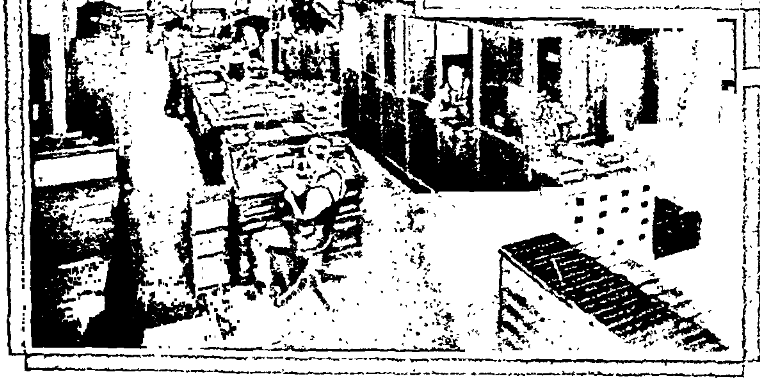


Fig. 17.—A section of the composing-room showing—at the window of his room—the superintendent of the mechanical departments, Mr. Edward D. Harris, and—at the desk—the foreman of the composing-room, Mr. George J. Harris. Looking beyond, toward the west, one sees part of the make-up stones, that part of the room containing the hand-set cases.

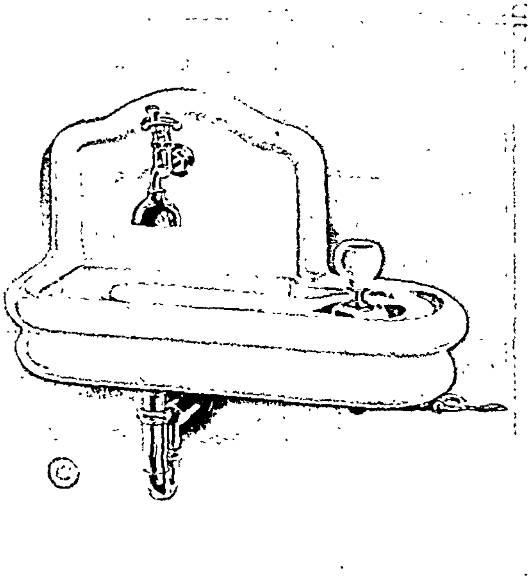


Fig. 16.—The American Medical Association special combination drinking fountain, on each floor. This fountain is specially designed for the American Medical Association. At the right is the sanitary bubbling cup, which flows when the lever at the right is pressed down; at the left is the ordinary faucet. The water supplying these fountains is filtered and cooled by the ammonia process.

MEDICAL COLLEGES

A large alcove in the Educational Department is devoted to information regarding the medical institutions of the world. This consists of extensive files comprising the announcements and catalogues of medical colleges in the United States and of nearly all of the medical teaching institutions of the Old World. These files are constantly being added to, not only as new announcements are issued, but also by back numbers of the announcements of medical schools, both existing and extinct. Here also are extensive files of educational reports, medical council reports and other pamphlets bearing on medical education. There are also files of catalogues, reports and pamphlets giving information in regard to secondary schools and colleges of liberal arts.

A CLEARING-HOUSE OF MEDICAL EDUCATION

Thus, the Council on Medical Education is carrying out one of the chief functions for which it was created, namely, the establishment of a clearing-house for all matters pertaining to medical education. Probably nowhere else can be found such a vast amount of data relating to medical education in all parts of the world.

EXCHANGE AND ABSTRACT DEPARTMENT

A prominent and valuable feature of The Journal is that department devoted to Current Medical Literature, in which is published, each week, abstracts of the leading articles of interest appearing in the principal medical journals of the world. A large room is devoted to this and here are files for the various medical journals. There are received, approximately, three hundred and thirty-five different journals, each one of which has a special compartment in the file as will be seen by the illustration (Fig. 34). These files are numbered crosswise and lettered up and down. A large card contains the list of journals with the letter and number of reference which makes it possible for one to go direct to the periodical wanted.

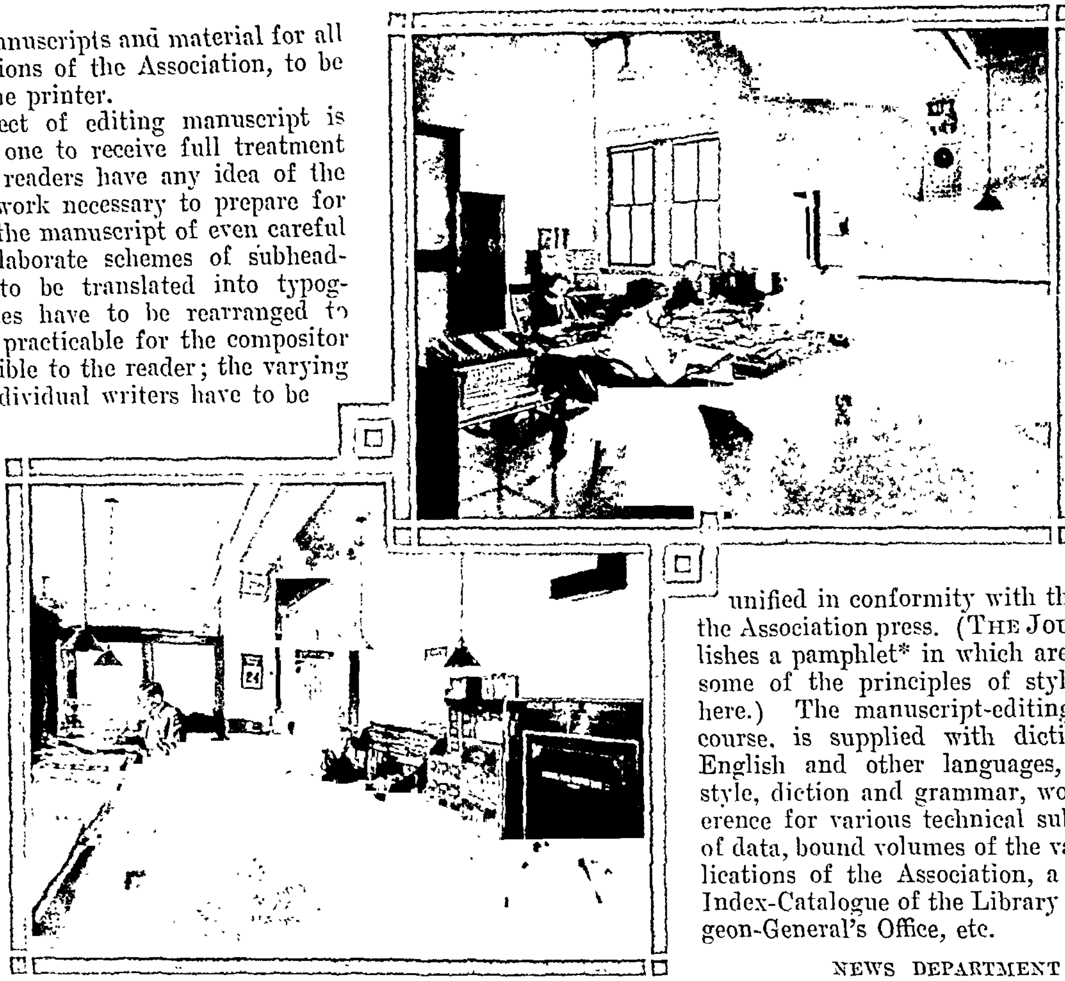
MANUSCRIPT-EDITING ROOM

Adjoining the exchange room is a large room (Fig. 32) in which all manuscript is edited. Into this room

Figs. 19-23.—A group of editorial offices. In the center is the office of the editor and general manager. The upper left view shows the room of Dr. Frederick R. Green, secretary of the Council on Health and Public Instruction. The upper right view is of the room of Dr. E. E. Hyde, the assistant to the editor. At the right below is the room of the department which investigates nostrums and quackery, in charge of Dr. A. J. Cramp. This room contains the "fake" files and the testimonial file, which together form the most complete collection of information concerning proprietary drugs, "patent medicines," "fake" cures, etc., to be found anywhere. The other view is a stenographers' room connected with the editorial suite; here are the stenographers of the editors and of the advertising manager, and here are kept card indexes of all articles received, accepted or published in all publications of the Association. On several of the pictures on this page will be noted a considerable number of baskets for correspondence. These baskets are emptied every hour by a clerk who carries the contents to the designated departments on the various floors of the building, this facilitating prompt action on letters, proofs, etc.

go all the manuscripts and material for all the publications of the Association, to be edited for the printer.

The subject of editing manuscript is too large a one to receive full treatment here. Few readers have any idea of the amount of work necessary to prepare for the printer the manuscript of even careful writers. Elaborate schemes of subheadings have to be translated into typography; tables have to be rearranged to make them practicable for the compositor and intelligible to the reader; the varying styles of individual writers have to be unified in conformity with the style of the Association press. (THE JOURNAL publishes a pamphlet* in which are explained some of the principles of style followed here.) The manuscript-editing room, of course, is supplied with dictionaries of English and other languages, books on style, diction and grammar, works of reference for various technical subjects, files of data, bound volumes of the various publications of the Association, a set of the Index-Catalogue of the Library of the Surgeon-General's Office, etc.



Figs. 24 and 25.—Two views of the accounting department. The lower view shows the cashier's office with Mr. E. C. Shelly, cashier, seated at his desk, and above is another view showing the mail opening department with the billing machines and the electric adding machine, etc All of the mail is opened by one bonded clerk. It amounts to something like 750 pieces a day at ordinary times, and from 1,000 to 2,000 pieces of mail a day at busy seasons. This applies to first class mail only. The exchanges, marked copies, newspapers, books, etc., come in sacks and are opened in another department. There are about 45 feet of high desking supplied with cupboards and drawers surrounding three sides of the room. The open door gives a view of a store room. In this room is kept the supply of pamphlets, reprints and other publications of the Association, and daily orders are filled from this stock. There is a large vault which is not shown in the pictures which contains files with the canceled voucher checks, ledgers and other records of the accounting department. There is also a fireproof and burglar-proof safe.

NEWS DEPARTMENT

In the main room on this floor is the news department. The "Medical News" feature of THE JOURNAL is not the least important and to glean the news for each weekly issue is quite a task. The sources of supply are personal communications, letters from occasional and regular correspondents and press clippings. In this department are kept, in envelopes, alphabetically, biographic records of physicians,

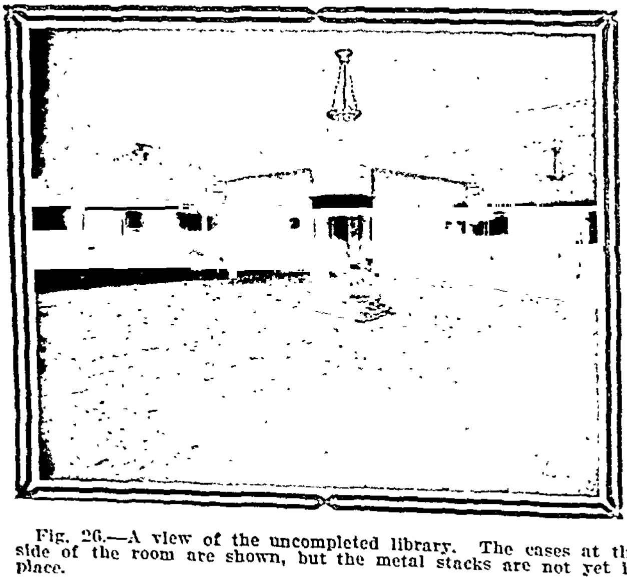


Fig. 26.—A view of the uncompleted library. The cases at the side of the room are shown, but the metal stacks are not yet in place.

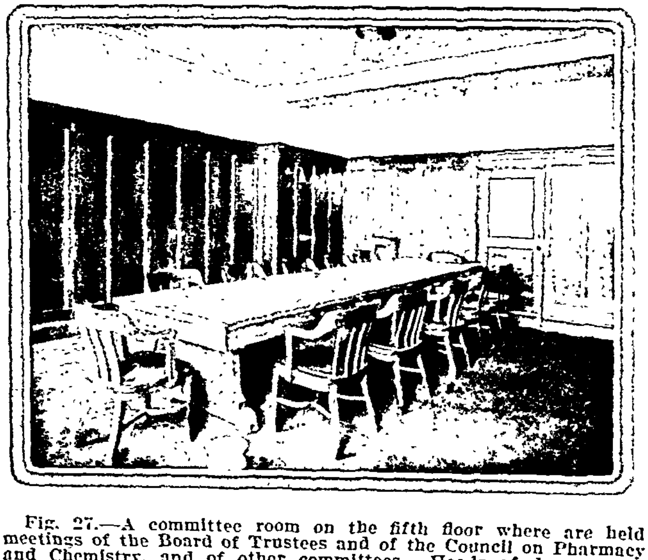


Fig. 27.—A committee room on the fifth floor where are held meetings of the Board of Trustees and of the Council on Pharmacy and Chemistry, and of other committees. Heads of departments are occasionally called together here to discuss some question of importance to all.

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* A copy will be sent on receipt of 10 cents.

each bearing an individual's name. Into these envelopes are placed clippings and biographic notes. On the appointment of a physician to some important office, or in case of his death, the information contained in the envelopes is valuable in writing the appropriate notices.

ASSISTANT TO THE SECRETARY

The assistant to the secretary occupies the northwest corner of the fourth floor. In this room is kept information regarding the personnel of the organization. This information includes lists of members of all the component county societies of the country, kept by the card index method, arranged by counties and states.

Figs. 28 to 31.—Four views in the business office on the third floor. The upper view shows the office of the manager of the advertising and subscription departments, Mr. W. C. Braun. The view on the right is of the subscription and membership departments. The one on the left is a corner of the general office showing the house telephone exchange and operator, the office boy, the house mail-delivering clerk, and the letter filing and correspondence mailing departments. Just beyond the glass partition is the waiting-room. The glass door straight ahead leads to the editorial suite. A feature of the letter mailing department not shown in this picture is an electric machine which seals, stamps and counts 150 letters a minute, another of the time saving devices of the office. It is especially important as a check on the number of postage stamps used. The lower picture is a general view of the subscription, membership and advertising departments, with the accounting department on the right in the background.

NOSTRUMS AND QUACKERY

In addition to the amount of publicity to which it has subjected the so-called proprietaries, through the Council on Pharmacy and Chemistry, the Association devotes considerable effort to the investiga- of those medical evils which affect the people more directly—"patent medicines" and quackery. During the past year alone, over one hundred "patent medicine" products or quack institutions have been critically discussed in The Journal. Many of the these articles have been elaborated, profusely illustrated and reprinted in pamphlet form for distribution to the laity. That this work has awakened great interest in the subjects discussed is evidenced by the large number of inquiries that have been received on the subject. Hundreds of queries come in and are answered each month. A very large proportion of these have been answered by personal letter because of lack of space in The Journal.

The department in which this work is done (Fig. 23) has an exceedingly comprehensive file—usually referred to colloquially as the "Fake File"—containing a vast amount of data on medical and pharmaceutical fakes. The size of this file is steadily increasing and it probably contains more information on the subjects dealt with than is to be found in any other one place. Advertising matter, both old and new, is to be found here: "follow-up letters" from quacks, "patent medicine" labels, reams of testimonials — these and the other paraphernalia that form the stock in trade of the nostrum exploiter and the quack are to be found classified and arranged in this file. Nor is this all: the names of the individuals who are behind many of the widely advertised "patent medicine" concerns, medical institutes etc., are included in the information that is here available. A comprehensive card index of over fifteen thousand cards is kept in connection with this file and an elaborate system of card indexing makes the information contained therein available in a moment.

Figs. 32 to 34.—View of the main room, fourth floor, showing, in the foreground, the desk of Dr. S. C. Stanton, the news editor; in the center, the directory department; and, in the rear, the extensive files of the Council on Medical Education, and the office of Dr. N. P. Colwell, secretary of that Council. The view on the left shows a part of the manuscript editors' room, in which all copy is prepared for the printer; on the right is the exchange and abstract room.

The "Testimonial File," which is in the same department, contains the names of those physicians who make a practice of writing testimonials for proprietary products. There are over sixteen thousand cards in this file, and while most of the names it contains are for testimonials each to a single product, a large number have more than one. Some individuals have as many as twenty-five or thirty preparations against their names. The number of new names added each year, fortunately, is steadily decreasing.

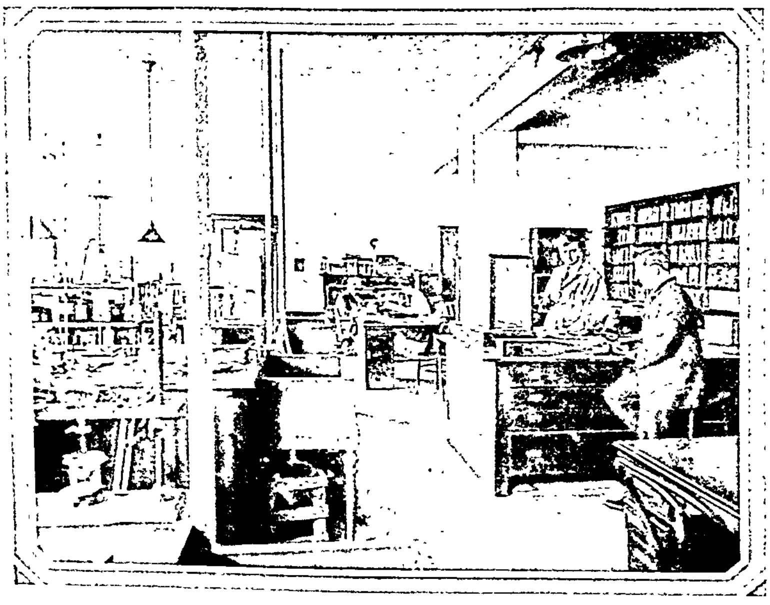

Fig. 35.—This, the main room of the chemical laboratory, is 30 by 40. The director, Mr. W. A. Puckner, is seated at his desk in the west end of the room, and his assistant chemists, Messrs. W. G. Hilpert and L. E. Warren, are standing.

The "Drug File," also compiled in this department, contains the names of all new drugs — proprietary and otherwise—whose use is described in current medical literature. Well-known non-proprietary drugs, when used in any uncommon way, are also listed in this file. In each case the reference and data are given. The value of this file of over 3,000 cards is appreciated when information is wanted on the probable therapeutic value of proprietary mixtures containing one or more obsolescent drugs. Ordinary textbooks contain practically no reference to drugs of that kind.

To look over even a fraction of the material collected in this department is to have overwhelmingly drivicus, was a prominent symptom. This was supposed to be due to a crowding of the other organs by a dislocation of the uterus upward.

Indications on the prescription show that various classes of precious and semiprecious stones were used for patients of differing degrees of wealth. For the very wealthy, a valuable stone like sapphire was used. For those of moderate wealth a more modest stone would do. For the poor, malachite, which was rather common, sufficed. The remedies which cure the nervous affections of ordinary people seem never to have been capable of producing the same effect on the neurotic symptoms of the wealthy, for whom something quite different, and above all, much more costly is required. Further study of the specimen will doubtless bring out more interesting details with regard to the medicine of the time.

THE PUBLIC DRINKING-CUP

The "cup of death" is rather gruesomely pictured in the *Cup-Campaigner* as a skull, with its top sawed off (as in autopsies), a handle fashioned to the occiput, a chain attached to the handle, the other end being fastened to a drinking-fountain. A campaign against the public cup is now being conducted throughout the Union. Several states have already taken action, Kansas being the first to abolish the common drinking-cup; Michigan, Wisconsin, Mississippi, New Jersey, New York, however, have fallen in line. Pennsylvania, through the secretary of her state board of health, warns her people that "the cup used in common in public places must inevitably be the constant medium of communication of diseases such as tuberculosis, diphtheria and other infections." In Illinois it is declared that "the public drinking-cup is as antiquated as the ducking-stool and the inquisition; people never think of eating from public plates or wearing public clothes or smoking public cigars."

Illinois has just passed a bill abolishing the use of the public drinking-cup. Chicago, through its health department, supported by the newspapers, has waged an active campaign against it. The city bacteriologists have collected drinking-cups from various school buildings, hotels, railway stations and stores in the city of Chicago and have made microscopic examinations and bacterial cultures from these cups. The most frequent varieties of germs found are various pus germs, also, specimens of pneumonia and diphtheria bacilli have been found. Guinea-pigs have been inoculated with these cultures and the results of these tests, according to the city bacteriologists, prove the deadly nature of these bacteria. All the pigs inoculated with the bacteria of the pus infections developed fatal abscesses. The tests with the diphtheria culture were also positive, as proved by the occurrence of the disease.

In Connecticut (as also in other states) private banking-houses, hotel managers, department-stores and other corporations are cooperating with the health authorities for the protection of their employees and their patrons and for the installation of the bubbling drinking-fountain in railway trains and stations, in parks and other public places. Many cities are moving in the same direction. New York City, after October 1, will make illegal the use of the public drinking-cup in any public institution, hotel, theater, factory, hall, school, railway station or ferry house; already some of the public schools of New York City have been equipped with a jet apparatus, so arranged that the child's lips do not touch any part of the machinery.

A large number of railroads have adopted a paper cup, supplied to the thirsty on putting a penny in the slot, which may be used for the entire trip. In trains, of all places, is this a necessary measure, both for disease prophylaxis and for elementary decency. Again, in barrooms, glasses, after being used, often receive no more attention than a dip in cold water and a perfunctory wipe with a towel that has already seen considerable service. At soda-water fountains also, "a lick and a promise" by way of apology for washing, are much in evidence. Such glasses may look clean, but often the invisible pathogenic bacteria remain to enter any abrasion of the lips, or possibly to penetrate an intact mucous membrane.

Elimination of this means of spreading disease, especially those most unfortunate cases of lues innocentium, should receive support, and might well be extended to cover a number of other public uncleanlinesses.

THE TREATMENT OF NEURALGIA WITH INJECTIONS OF ALCOHOL

The treatment of neuralgia by means of superficial or deep injections in the vicinity of the trunk of the affected nerve of sterile water or of saline solution or of various medicinal substances, anesthetic or otherwise, in solution is no new procedure, and good results have been obtained in this way. As our readers know, it is, however, only within the last decade that injections of alcohol, 70 per cent., 80 per cent., 90 per cent., into the sheath of a nerve have been made with the same object in view, and more particularly for the relief of trigeminal neuralgia.

In the hands of those who have had the largest experience the results have been most satisfactory.[1] Especially in the case of the branches of the fifth nerve the operation requires special skill and special apparatus by reason of the deep and concealed situation of the structures. Here the object is to reach the trunk of the first division in the sphenoidal fissure, or the second division in the round foramen, or the third division in the oval foramen, and these may be approached either from the side of the face or from the interior of the mouth. The operation is attended with some pain or a sense of burning, but the majority of operators do not use general or even local anesthesia, although some do. If the injection be properly made relief from pain follows within an hour or so in association with anesthesia or numbness of the parts supplied by the nerve subjected to treatment, and in many cases paresthesia in the skin or mucous membrane. The anesthesia, numbness or paresthesia gradually wears off, while the pain usually remains absent for months or even for years. Sometimes, perhaps because the injection does not thoroughly reach the nerve, the relief is but slight, and the injection must be repeated in a day or two or a week. Occasionally, several injections may be required, and it may be necessary to inject several branches of the fifth nerve on one or on both sides. The operation is comparatively free from danger, although circumscribed edema or a hematoma may develop, or a blood-vessel may be penetrated or a motor nerve injured. The technic can be readily acquired.

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[1] See the index of THE JOURNAL for the past four and one-half years for articles by Patrick, Hecht and others on this subject, among which the following may be mentioned: Blair, V. P.: Notes on Trifacial Neuralgia Treated by Deep Injections, THE JOURNAL A. M. A., Feb. 4, 1911, p. 335. Patrick, H. T.: Seventy-Five Cases of Trifacial Neuralgia Treated by Deep Injections of Alcohol, THE JOURNAL A. M. A., Dec. 11, 1909, p. 1987.

The procedure is indicated when the usual measures—medicinal, climatic, hygienic, physical—have failed, and it may be employed even after operations on the Gasserian ganglion have been unattended with success. Further, failure with this expedient does not preclude other surgical intervention. Endoneural injection of alcohol for the relief of neuralgia is applicable only to sensory nerves, inasmuch as serious muscular paralysis might result from infiltration of a motor nerve. Deliberate injection of a motor nerve may, however, be practiced in the presence of tonic or clonic muscular spasm.

THE SUPREME COURT ON THE FOOD AND DRUGS ACT

The Supreme Court's interpretation of the Food and Drugs Act in the case that is technically known as the United States *vs.* O. A. Johnson, has already been commented on in THE JOURNAL.[1] This week we reproduce in "The Propaganda for Reform" the full text of both the majority and the dissenting opinions of the court. A careful reading of these two documents will prove both interesting and instructive. Without desiring to criticize the findings of the highest court in the land, we believe that a careful study of the majority opinion will lead to the inevitable conclusion that the court had to strain the meaning of the English language and flounder far afield in order to find points on which to reach a decision that would uphold the lower court. On the other hand, we believe that all open-minded persons will declare that Justice Hughes' dissenting opinion is as superior in logic and common sense to the majority opinion as it is in composition and clearness of expression.

On analyzing the majority decision, it is found that the court admits that the claims made by Johnson for the curative effect of his nostrum were "false, or, at least, misleading." The court holds, however, that the words in the act which prohibit "any statement . . . which shall be false or misleading in any particular," mean "false or misleading" in *certain* particulars, namely, those relating only to the composition of a drug product or its place of manufacture. The court admits further that while "logically" interpreted the law probably prohibits the making of false statements regarding curative effects of drugs, interpreted "idiomatically it does not" prohibit. It appears then, that not only have Dr. Wiley and his assistants, in the past, interpreted the Food and Drugs Act in the interest of the sick who might be swindled, but they have interpreted it "logically." The Supreme Court, on the other hand, interprets the words of the act in an "idiomatic" sense— and incidentally in the interest of as cruel a gang of swindlers as ever operated under the protection of the law.

One point more is worth noting while discussing the majority decision: In the closing paragraph, while the court does not explicitly state that in its opinion Congress has no constitutional right to prohibit false statements regarding the curative effect of drugs, yet it is hard to read into that paragraph any other meaning. The court apparently holds that should Congress specifically prohibit false claims for curative effect, it would, in so doing, "distort the uses of its constitutional power" by establishing criteria "in regions where opinions are far apart." We believe that it is not necessary for a man to be learned either in law or in medicine to be able to see on the face of it that the claims made by Johnson the cancer cure quack and by those of his kind, are false *per se,* and in determining the falsity it is not necessary to wander into "regions where opinions are far apart."

In his dissenting opinion, which was concurred in by Justices Harlan and Day, Justice Hughes, in referring to the limitations which the majority of the court has placed on the meaning of the act, said:

> "I fail to find a sufficient warrant for this limitation, and on the contrary, it seems to me to be opposed to the intent of Congress and to deprive the act of a very salutary effect."

Mr. Hughes says further that to limit misbranding to mere statement of composition and place of manufacture is to "ascribe an altogether undue weight to the wording of the clause and to overlook the context." He says that, as must be evident to anyone:

> "If Congress had intended to restrict the offense to misstatements as to identity, it could easily have said so. *But it did not say so.*"

Moreover, it is pointed out that when the question was before Congress, that body refused "so to limit the statute." To the argument that the curative properties of drugs are matters of opinion and that there are conflicts of opinion both between different schools of medicine and between individuals of the same school, he delivers this common-sense, knock-out blow:

> "Granting the wide domain of opinion and allowing the broadest range to the conflict of medical views, there still

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[1] THE JOURNAL A. M. A., June 3, 1911, p. 1660, and June 10, 1911, p. 1725.

remains a field in which statements as to curative properties are downright falsehoods and in no sense expressions of judgment. This field, I believe, this statute covers."

The dissenting justices hold that where a nostrum has been represented to be a cure, when as a matter of fact it is "absolutely worthless and an out-and-out cheat, the act of Congress can be said to apply to it." Finally, Justice Hughes sums up the whole question in one pointed and pertinent sentence:

> "WHY SHOULD NOT WORTHLESS STUFF, PURVEYED UNDER FALSE LABELS AS CURES, BE MADE CONTRABAND OF INTERSTATE COMMERCE—AS WELL AS LOTTERY TICKETS?"

We believe that the country is asking the same question. Congress should answer it!

PROPHYLAXIS OF FOURTH-OF-JULY TETANUS

We have every reason to hope that the annual crop of tetanus cases will not be so large after this Fourth-of-July celebration as in previous years, for the "sane Fourth" movement seems to show a healthy growth, and tetanus occurs only in those places that still tolerate an insane Fourth. In 1909 there were reported 1,225 blank-cartridge wounds with 150 cases of tetanus, while in 1910, largely as a result of improved control of celebration by municipalities, only 450 blank-cartridge wounds were inflicted—a mere trifle—causing but seventy-two cases of tetanus, of which about sixty-seven were fatal. Even though this great improvement has taken place, we are still of the opinion that such comfort, joy and patriotic fervor as may be yielded by the primitive custom of celebrating Independence Day by explosives, is not worth the 131 lives and 2,792 injuries of greater or less severity which it cost last year. Enough others seem to be of the same opinion to assure a decreased expenditure of life, blood and cuticle for the 1911 celebration, but not enough to reduce this to zero.

It is still necessary to impress on practicing physicians the fact that, however many accidents may occur, the loss of life from tetanus is almost entirely preventable. Sixty-seven deaths from tetanus last year means that at least sixty-five lives might have been saved by prompt injection of antitoxin immediately after the wound was received. Undoubtedly in many cases this failure was caused by the neglect of the patient or his parents; but not a few failures, we regret to say, rest on the shoulders of the attending physician. Surely, after all the years in which the danger of tetanus from blank-cartridge wounds and the efficiency of tetanus antitoxin as a prophylactic have been heralded in the medical press, there is no reasonable excuse for such neglect. It should be remembered that the percentage of deaths from blank-cartridge wounds received in last year's celebration was greater than from bullet wounds, only 10.2 per cent. of the latter causing death, while 12.7 per cent. of the blank-cartridge wounds were fatal. The experience of each year, as to both Fourth-of-July injuries and ordinary traumas, strengthens the standing of tetanus antitoxin as a prophylactic agent, especially when given immediately after the wound is received. We would particularly emphasize, however, that antitoxin is not a substitute, but an accessory to thorough surgical cleansing, and also that the most thorough surgical care without antitoxin is not proof against tetanus when blank-cartridge wounds are under consideration. It must be realized that the cleansing of these wounds is a major operation, which can be performed only under complete anesthesia. The few recorded cases in which antitoxin has failed to prevent tetanus after suspicious injuries have usually occurred when a local infection has permitted the tetanus bacilli to live in the tissues until such time as the antitoxin has been eliminated or destroyed; hence in cases in which suppuration takes place in the wound, repetition of the prophylactic injection should follow at intervals of from eight to twelve days until complete healing has taken place. Neither should antitoxin be omitted when patients are not seen until the wound is several days old, but rather it should then be given in large doses, for although not certain to prevent tetanus when given this late, yet if tetanus does arise the prognosis is decidedly better if antitoxin has been used.

As to the curative treatment of tetanus, there still fails to be any decided step in advance. The magnesium sulphate treatment contains an element of danger which should limit its use for the present to large clinics and hospitals, where all conditions can be controlled, and where expert consideration can be given to the procedure. Unsparing use of antitoxin is apparently advisable after symptoms of tetanus have manifested themselves, and a review of the world's literature on the use of antitoxin gives strong indication that the intraspinal route is the method of choice. Not only is it theoretically advisable on the ground that antibodies injected into the blood are not secreted into the cerebrospinal fluid in large amount, but also because the clinical reports show a distinctly higher percentage of recoveries in cases in which the antitoxin has been given in this way.

Current Comment

GREAT IS MAMMON

Over a month ago we called attention to the fact that the referee board had upheld Dr. Wiley's contention that saccharin was injurious and, on the strength of this decision, the Secretary of Agriculture had declared that after July 1 of this year saccharin-containing foods would be regarded as adulterated under the Food and Drugs Act. Of course, a protest at once was made by those whose pocketbooks would be hurt by the decision; namely, the manufacturers of saccharin and those "food dopers" who think more of dividends than of public health. They pointed out that vast sums of money had been invested in the saccharin business and that the order issued by the government would practically destroy this business. The wail was heeded, and the sale of foodstuffs that are adulterated with "a poisonous and deleterious substance" instead of being prohibited after July 1, 1911, has been permitted to continue until May 1, 1912. The fact that saccharin is a harmful substance, and that in the interest of the public health its use in foods should be prohibited, counts as nothing when the almighty dollar is at stake. According to the Charleston (S. C.) *News-Courier*, Secretary Nagel, of the board of review, takes this attitude in cases of this kind:

> "Where the question about these foods is a close one, every consideration should be shown to the man who has invested his money in a business."

In other words, when the question between public health and individual profit is not clearly defined, decide in favor of individual profit! As the Charleston *News-Courier* says:

> "Here the lines were plainly drawn. This man's dollar was up against that man's health. The man for the dollar was there to speak for himself. The man whose health was to be placed in jeopardy was not there. The man with the dollar won, of course."

LINGER IN LOS ANGELES

The Los Angeles Committee on Arrangements most cordially invites all who attend the annual session to remain over the following Sunday. The rules restrain entertainments during the time the sections are holding their meetings. The committee, therefore, plans most elaborate entertainments on Friday and Saturday. A considerable amount of money has been raised and the committee would be sorry not to have its guests present to enjoy the good things which have been provided. A list of entertainments was given in THE JOURNAL May 20. It includes a Spanish luncheon in the beautiful sunken gardens, Roman chariot races and a midsummer night carnival. There will be trips to the orange-groves, to the beautiful bay of Avalon on Catalina Island and to San Pedro Harbor, Long Beach and other suburban beaches and resorts. It ought not to be hard to grant such a request as this. The reputation of California for hospitality adds a most delightful flavor of sincerity and cordiality to the urging of the committee, and we pass the invitation on to all of our readers with hearty endorsement.

THE TUBERCULOUS PATIENT AFTER SANATORIUM TREATMENT

Pennsylvania is one of the states that have made considerable advance in the institutional treatment and after-care of tuberculous patients. In addition to a number of state sanatoriums, there are distributed throughout the state some one hundred and fifteen tuberculosis dispensaries. The health commissioner of that state, Dr. Samuel G. Dixon, has prepared instructions to aid physicians and nurses in charge of these dispensaries in systematically following up these patients after they have left the sanatoriums. This is done principally by the trained nurses connected with the dispensaries. Under these instructions, the nurse in her visits to these patients is required to note details of their physical condition, not of course making such an examination as the physician makes, but observing whether a patient is improving, holding his own or going backward; the patient's general living condition; if employed, how many hours he is able to work, and conditions surrounding his work; facts as to the patient's present and previous earnings; family income; habits in regard to the use of alcohol and tobacco; number of hours the patient is able to rest; amount of sleep he takes; general sanitary conditions of his home, etc. The nurse also investigates particularly whether tuberculosis has developed in the patient's immediate family or among his relatives, and whether any connection exists between the new and the old cases. The institutional treatment of tuberculosis is now regarded as most effective. One of the difficulties connected with it, however, is the fact that most of the patients leave the institutions before they are cured. This is true as regards private sanatoriums, but especially of the state or municipal institutions, where there is such a large demand for admission, making it seem almost necessary to limit the time the patients may remain in such institutions. Hence it is most wise, if permanent results are to follow, that attention be given to the patients after they leave the institutions; and this not alone for the individual patient's good, but that he may not become a source of infection to his family and the community. The after-supervision is recognized by all as of great importance, and the system followed in Pennsylvania offers valuable suggestions that might wisely be followed in other states.

INDUSTRIAL LABORATORY SECRECY

It is a principle of the medical scientist working in the fields of chemistry, therapeutics, physiology, bacteriology, etc., or the surgeon in his special field, in originating an improved or new surgical procedure or instrument, immediately to give the world the benefit of his discovery or invention, without reservation and without material reward. In this age the discoveries of research workers and experimenters are seized on with avidity and applied in industry for commercial profit. So enterprising have industrial firms become that many of them maintain finely equipped laboratories and competent staffs of workers to invent and improve processes and substances which may be exploited for profit, taking advantage of every revelation of science. This is particularly true of discoveries in chemistry and biology, which may be applied in the treatment of disease. Many of these laboratories develop independently products of great value and in their work attain results or establish facts which cannot be utilized by them, but which might, if given to the world, lead to other discoveries of the highest scientific importance, perhaps in an entirely different direction. In making a plea for a more generous publication of scientific results in industrial laboratories, Prof. William H. Walker, of the Massachusetts Institute of Technology, in a recent address[1] says that there is a heavy moral obligation on the part of large industrial organizations maintaining fully equipped laboratories to contribute their share to the advancement of the world's knowledge, and that they could do much in this way without harm to themselves. In this respect he compares the attitude of the industrial establishments of Germany with those of this country, to the distinct advantage of the former. There are some notable exceptions to the rule, however, as in the instances of a few of the large commercial biologic laboratories of this country. But Professor Walker rightly deprecates the spirit which would have these laboratories remain the secret chambers of the alchemists, as it were, wherein to improve their methods of changing baser metals into gold without regard to their larger obligations to humanity. He rightly demands that they should join in the work of the special laboratories endowed by philanthropy and aid more largely in the general advancement of science.

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[1] Walker, William H.: Scient. Am., April 29, 1911, p. 422.

THE PASSING OF THE SMOKY CHIMNEY

Portraits of the literal, inartistic kind, when many years old, often have a ludicrous appearance, owing to changes in style of dress. Similarly, years hence, some of our present customs will invite a supercilious smile from the rising generation, for surely they are fated to become obsolete, and when they have become so it will be hard to understand why they were ever tolerated. The smoking chimney is a sample. We have before us the letterhead of the "Department of Public Safety. Office of the Superintendent of Hospital," of one of the largest cities of our country. A very carefully executed engraving of the hospital and grounds adorns the letterhead. In the background a smokestack rises from the heating plant. The artist, knowing that a smokestack was meant to smoke, does his duty nobly. The smokestack belches forth a black cloud. Such an exhibit on the letterhead of a Department of Public Safety will be absurd twenty-five years hence. This conception of the artist — namely, that a chimney should smoke — has been a source of amusement before now. Health resorts, steamboat lines and railroad companies often portray on their advertising matter a steamboat or engine belching out a veritable cloud; and the apparent besmirching and discomfort of all who are within reach cannot be said to be a first-class advertisement for the resort or the railroad. Customs change. Although a moving railroad train without a cloud of smoke would seem to be as much of an anomaly now as a horseless carriage would have seemed a short time ago, in the future the anomaly—and a most discreditable one—will be the smoking stack, at least within urban limits.

Symptoms of Phlegmon of the Larynx.—If seen during the first twenty-four hours, writes J. Harper in the *Practitioner*, the local appearance of acute phlegmon of the pharynx is that of follicular tonsillitis, but the general symptoms are out of all proportion to that disease. The disease is usually ushered in by severe shivering. In a short time the slight discomfort in the throat has developed into severe pain, and almost from the commencement the temperature is high, ranging between 103 and 106 F. The pulse at first is full and bounding though rapid, but soon becomes feeble. In a remarkably short time the patient's condition becomes extremely weak, in some cases going on to delirium and coma.

Medical News

ILLINOIS

University of Illinois Gets Appropriation.—Governor Deneen has signed the bill providing for an appropriation of over three and a half million dollars for the immediate support of the University of Illinois and for a mill tax each year for the future. Another item in the bill provides $60,000 per year for two years for the College of Physicians and Surgeons of Chicago, which will hereafter be known as the College of Medicine of the University of Illinois.

Chicago

Personal.—Dr. and Mrs. Clarendon Rutherford have started for Europe.——Dr. Newton D. Lee is said to have narrowly escaped drowning at Gray's Lake, June 4.——Dr. P. J. H. Farrell has recovered from his recent illness and resumed practice.

Home for Nurses.—Plans for a home for the nurses of Mercy Hospital have been started by the sisters in charge. It is proposed to erect a building to cost $100,000 and to accommodate 120 nurses. The urgent necessity for this lies in the fact that seventy of the nurses will soon be obliged to leave their present quarters on account of a decision of the city building department.

Medical Reserve Men Organize.—On June 6, the third meeting of the members of the Medical Reserve Corps, U. S. Army, was held in Chicago. Lieut. Charles Adams, surgeon-general of Illinois, presided, and Lieut. Samuel C. Stanton was secretary. After remarks by Col. L. Mervin Maus, M.C., U. S. Army, and Surgeon George B. Young, U. S. P. H. and M.-H. Service, on the scope and object of the medical reserve corps, a constitution was adopted and the Association of the Medical Reserve Corps, U. S. Army, Illinois Division, was formally organized and the following officers were elected: president, Lieut. Frank Billings; vice-president, Lieut. Edmund J. Doering; secretary and treasurer, Lieut. J. Allen Hornsby, and councilors, Lieuts. Charles Adams, Junius C. Hoag, Daniel A. K. Steele and Albert E. Halstead. Votes of thanks were given to Colonel Maus and Capt. James F. Hall, M.C., U. S. Army, for their aid in organizing the association, and these gentlemen, with Surgeon George B. Young, U. S. P. H. and M.-H. Service, and Brig.-Gen. Robert M. O'Reilly, M.C., U. S. A., retired, were made honorary members of the association.

Hospital Notes.—A free tuberculosis clinic was opened at St. Elizabeth's Dispensary, Blackhawk Street and North Ashland Avenue, June 2. Dr. Stephen R. Pietrowicz is attending physician and the clinic will be open on Mondays and Thursdays from ten o'clock until noon.——Plans are being prepared for the initial building for the Chicago Fresh Air Hospital at 7528 North Western Avenue. A three-story administration building, 50 by 150 feet, is first to be erected.——Property near Michael Reese Hospital has been purchased by the trustees of that institution on which the Sarah Morris Hospital for children, for which $300,000 was provided in the will of the late Mr. Nelson Morris, will be erected.——The Danish Hospital Association has been incorporated and proposes to build a Danish hospital on the south side of Chicago in honor of the late Dr. Christian Fenger, to be known as the Fenger Memorial Hospital.——By the sale of eight cornerstones and other privileges, $5,000 was raised, May 28, for the Maimonides Kosher Hospital which is now in course of construction at California Avenue and Rebecca Street.

INDIANA

Birth and Death-Rate.—During 1910 the birth-rate for Indianapolis was 20.03 per 1,000 and the death-rate 17.28 per 1,000. The rate for 1909 was 18.35 per 1,000 for births and 12.67 per 1,000 for deaths.

Sanitary Advancement in Public Schools.—The Indianapolis public schools have discarded the individual drinking cups and have placed bubbling fountains in every school building, and the use of sanitary tissue-paper towels is now being tried in place of the old-fashioned roller towel.

KENTUCKY

Dean Resigns.—Dr. Thomas C. Evans, Louisville, who, since the consolidation, has been the dean of the medical department of the University of Louisville, has resigned on account of ill health and Dr. William E. Grant has been selected as his successor.

Society Meetings.—At the annual meeting of the Southwestern Kentucky Medical Association, held in Paducah, May 17-18, the following officers were elected: president, Dr. William G. Kinsolving, Eddyville; vice-presidents, Drs. T. Atchison Frazier, Marion, and Claude E. Kidd, Paducah; secretary, Dr. Henry G. Reynolds, Paducah (reelected); treasurer, Dr. Vernon Blythe, Paducah (reelected), and historian, Dr. Robert T. Hocker, Arlington (reappointed). The next session will be held in Clinton, October 31.——Eagle Valley Medical Association, at its annual meeting held in Sanders, elected the following officers: president, Dr. Edward E. Bickers, Henry County; vice-president, Dr. C. H. Duval, Warsaw, and secretary and treasurer, Dr. John W. Botts, Owenton.

LOUISIANA

St. Luke's Guild Organized.—At a meeting held at the residence of Archbishop Blenk, New Orleans, May 27, an association of Roman Catholic physicians and dentists was organized, the design of the association being to open free clinics for the Catholic poor, not only in New Orleans, but in the centers of population all over the state. Among the officers elected are Drs. Lucien M. Provosty, New Orleans, and Charles M. Menville, Houma, vice-presidents, and Dr. Albert E. Fossier, New Orleans, treasurer.

State Railway Surgeons Organize.—On May 29 the Louisiana Railway Surgeons' Association was organized at Shreveport by surgeons of the Louisiana Railway and Navigation Company, Vicksburg, Shreveport and Pacific Railway, Alabama and Vicksburg Railway, and New Orleans and Northeastern Railway. The following officers were elected: president, Dr. Hermann B. Gessner, New Orleans; and vice-presidents, Drs. James B. Guthrie, New Orleans, and Stuart L. White, Ruston; secretary, Dr. J. D. Martin, Shreveport, and treasurer, Dr. Daniel W. Kelly, Winnfield.

MARYLAND

New County Society Officers.—At the annual meeting of the Howard County Medical Society, Dr. W. Rushmer White, Baltimore, was elected president; Dr. W. B. Gambrill, Ellicott City, vice-president, and Dr. Frank O. Miller, Ellicott City, secretary and treasurer.

Personal.—Dr. Claude C. Smink has resigned as surgeon on charge at the Bayview Hospital and has settled for practice at Lauraville.——Dr. Ira J. McCurdy, Frederick, has been detailed to make the preventive typhoid inoculation of the First Infantry, Md. N. G.

Baltimore

Personal.—Drs. William S. Halstead, William A. Fisher, Walter F. Sowers and Claude A. Stonecipher have sailed for Europe.——Dr. Nathaniel G. Keirle was given the degree of LL.D. by Dickinson College, Pa., June 7.

Antityphoid Vaccination.—Dr. Warren P. Morrill, superintendent of Sydenham Hospital for Infectious Diseases, advises general vaccination against typhoid, and the adjutant general of the state urges that all the militia going into camp this summer be so protected.

Faculty Changes.—The following appointments are announced in the University of Maryland: Dr. Harry Adler has been made professor of therapeutics and clinical medicine; Dr. Gordon Wilson, professor of clinical medicine; Dr. Joseph E. Gichner, associate professor of physical therapeutics and professor of clinical medicine; Dr. I. H. Davis, professor of operative and clinical dentistry, and Dr. B. Merrill Hopkinson, professor of oral hygiene and dental history.

Hospital and School for Crippled Children Opened.—The James Lawrence Kernan Hospital and Industrial School for Crippled Children at Radnor Park was dedicated, June 10. The property contains 63 acres and has on it a colonial mansion which, after having been remodeled, now contains thirty rooms. A modern cottage adjoins it, which contains twelve rooms, is to be used as a nurses' home. This institution will take the place of the City Hospital which it has occupied for the last fifteen years.

MASSACHUSETTS

Opium Seller Arrested.—Louis Quay, said to be the only Chinese doctor in Chinatown of Boston, was arrested June 1, charged with having opium in his possession. Another Chinaman was arrested at the same time, charged with being present when opium was found.

Personal.—Dr. Elmer E. Southard, Boston, secretary of the Section on Nervous and Mental Diseases, has been forced to give up his trip to Los Angeles because of an infection obtained at an autopsy on one of the patients in the strange tonsillitis epidemic which has been raging in and near Boston for some weeks. His assistant, Dr. Mooers, was infected by the same material and died from streptococcus septicemia and meningitis.

Harvard Post-Graduate Courses.—The post-graduate courses which have been held at Harvard Medical School for many years, have been organized into a definite school or department of the faculty of medicine so that the faculty, hereafter, will consist of the medical school, the dental school, and the graduate school in medicine, each presided over by a dean and administrative board, in addition to a dean of the faculty of medicine. Besides this, there is a division of medical sciences in the faculty of arts and sciences by which is administered master of arts, doctor of science, and doctor of philosophy degrees in medical subjects. This graduate school is to go into operation with the beginning of the academic year, 1912-1913. The proposed courses are: first, all-day courses, consisting of a general course in a variety of subjects for general practitioners, continuous throughout the school year, or special courses on single subjects for practitioners, teachers or specialists; second, interrupted courses or courses in special subjects for those who want instruction for a part of one or more days in the week; and third, research courses for men who wish to do original research work.

MINNESOTA

Detention Hospital Opened.—The formal opening of the new isolation hospital, erected by the village of Hibbing at a cost of $10,000, took place May 3. There are no cases of communicable disease in the hospital.

Personal.—Dr. and Mrs. William W. Lewis, St. Paul, have started for Europe.——Dr. Arthur W. Whitney, St. Paul, has been made chairman of the charter commission.——Dr. Roy J. Heron has resigned from the medical staff of the Soldiers' Home, Minneapolis, to enter private practice in North Dakota.——Dr. Homer F. Peirson has been elected chairman of the board of health of Austin.

MISSOURI

Hospital Directors Named.—Drs. Norman F. Terry, Theodore A. Coffelt, John R. Boyd and Robert L. Pipkin will serve as the directors of the Springfield Hospital Association for the ensuing year.

County Society Election.—Lafayette County Medical Society, at its annual meeting held in Lexington, May 11, elected the following officers: president, Dr. Caius T. Ryland, Lexington; vice-presidents, Drs. Ferdinand Schreiman, Concordia, and William A. Braecklein, Higginsville, and secretary and treasurer, Dr. Paul B. Clayton, Odessa.

Maternity Service and Nursery.—The trustees of the German Hospital, Kansas City, have set apart one floor of their new building for a maternity service and nursery. A modern equipment is being installed throughout. Dr. George C. Mosher has been elected obstetrician and director of the department and Dr. Frank C. Neff has been made pediatrist for the hospital.

St. Louis

Presentation to Health Commissioner.—On the retirement of Dr. H. Wheeler Bond as health commissioner, May 22, the officials and employees of the health department presented him with a silver punch bowl, ladle and tray.

Personal.—Drs. Walter H. Fuchs and James B. Pritchard have been appointed members of the board of health.——Dr. George A. Johns has been confirmed by the council as superintendent of the sanitarium and Dr. Michael J. Dwyer as superintendent of Robert Koch Hospital.——Dr. G. Alexander Jordan has been reappointed assistant health commissioner.——Dr. John B. Coryell has been elected grand medical examiner of the Knights and Ladies of Honor.——Dr. William Engelbach sustained painful injuries in a collision between his automobile and a work train of the United Railway Companies, May 19.

Memorial Services.—At a meeting of the St. Louis Medical Society, May 28, the nine members of the society who had died during the year were made the subject of eulogies by members. Dr. Gustav Baumgarten was eulogized by Dr. Washington E. Fischel; Dr. John E. Faber by Dr. Frederick W. Abeken; Dr. Theodore F. Fienup by Dr. Arthur N. Curtis; Dr. Robert Q. Gray by Dr. Paul Y. Tupper; Dr. John A. Leavy by Dr. James M. Scott; Dr. Julius F. Menestrina by Dr. Edward Horace Johnson; Dr. Bernard W. Moore by Dr. Edward W. Saunders; Dr. Edwin M. Nelson by Dr. Aaron J. Steele and Dr. Warren B. Outten by Dr. Frank J. Lutz.

NEW YORK

Jenkins Medical Association.—At the annual meeting of Jenkins Medical Association, held in Yonkers, May 11, the following officers were elected: president, Dr. L. B. Goldhorn, Mount Vernon; vice-president, Dr. Albert C. Benedict, Yonkers; secretary and treasurer, Dr. Frank W. Shipman, Mount Vernon; and trustees, Drs. Archibald M. Campbell and William F. Greene, Mount Vernon, and Edgar M. Hermance and Nathan A. Warren, Yonkers.

Personal.—Dr. Burt G. Wilder, Ithaca, emeritus professor of neurology and vertebrate zoology of Cornell University, Ithaca, has moved to Brookline, Mass.——Dr. Ambrose Beach, Coxsackie, underwent operation for appendicitis in the Albany Hospital June 3.——A building in Schagticoke, owned by Dr. James H. Lyons, Troy, was burned, May 26, with a loss of $3,000.——At the semiannual meeting of the Seneca County Medical Society, held in Seneca Falls, Dr. Elias Lester, Seneca Falls, who has been a member of the medical profession for more than fifty years, was the guest of honor.

New York City

Cholera Death on Ocean Liner.—The passengers on the steamship *Berlin* from Naples were held in quarantine on arrival at New York City on account of a death from cholera on board.

Personal.—Dr. Walter H. Conley has been appointed first deputy medical superintendent of Bellevue and Allied Hospitals, vice Dr. George O. Hanlon, promoted to general medical superintendent.——Dr. and Mrs. Louis Kast sailed for Europe, June 6.

New Polyclinic Hospital.—The New York Polyclinic Hospital will be completed about October 1. Dr. John A. Wyeth was the founder and is the secretary and moving spirit of the institution and the chief promoter of this new enterprise. The building is said to be the tallest hospital building in the country. The main building will be ten stories in height, with a solarium on the roof. On the ground floor will be the dispensary, rooms for the visiting staff, patients, trustees, etc.; on the second floor the medical and surgical amphitheater, four wards, examination rooms, *x*-ray and laboratory, and minor operating room; the mezzanine floor will be given over to diseases of the eye, ear, nose and throat; the fourth floor will be occupied by a children's ward, maternity ward, and museum; sleeping rooms for nurses and servants are located on the fifth floor; the sixth, seventh and eighth floors are to be devoted to private patients; the ninth floor to private operating rooms and wards; the tenth floor contains an isolation ward, and the dining rooms of the officers, nurses and servants, while the roof will be used as solarium for all patients. The legend over the entrance of the hospital is: "For the sick without regard to race or creed." The main building will cost about $650,000 and, with the adjoining ambulance station, training school for nurses, and cost of ground, will represent, altogether, an investment of about $1,000,000. About half of this is available at the present time.

OHIO

Personal.—Dr. Henry G. Meek, Bellaire, has been elected president of the Bellaire Board of Health, and Dr. Dixter W. Boone, health officer.

New Officers for State Board.—At the annual meeting of the State Board of Health, Dr. Frank Warner, Columbus, was elected president; Dr. Oscar Hasencamp, Toledo, first vice-president; Dr. Frank Boudreau, Cleveland, epidemiologist, and Dr. Charles O. Probst, Columbus, was reelected secretary-treasurer.

Cincinnati

Visiting Nurse for Eye Cases.—The board of health has accepted the offer of the Cincinnati Society for the Welfare of the Blind to give $1,000 a year for the employment of a visiting nurse to look after cases of affected vision in children, with especial reference to ophthalmia neonatorum.

Health Department Experience for Advanced Students.—The board of health of Cincinnati has voted that junior and senior students of the College of Medicine of the University of Cincinnati may have a practical course in public health and sanitation. The work will include the usual chemical and bacteriologic work of health departments, the questions of water-supply, sewage disposal, disposal of dead, sanitary tenement and house inspection, meat, vegetable and dairy inspection, school inspection and vaccination, tuberculosis field work (including dairy work), actual epidemiologic work (including tracing of cases and sources of infection), and finally, statistical work and methods of making and filing reports.

PENNSYLVANIA

Personal.—Dr. Francis H. Brobst of Reading has sailed for a two-year trip around the world.——Dr. Samuel S. Woodburn has been appointed a member of the council of Pittsburg.

Philadelphia

Personal.—Drs. Alexander C. Abbott and D. Braden Kyle have been reappointed members of the board of health.——Dr. James A. Erwin and Mrs. F. M. Erwin sailed for Europe, June 10.——Dr. J. Louis Borsch, formerly of Philadelphia but now of Paris, has been elected ophthalmic surgeon to the Trinity Lodge Hospital in that city to fill the vacancy left by the death of Dr. Bull.——Dr. H. Brooker Mills has been elected physician to the Northern Home for Friendless Children at Philadelphia.——Dr. George Hudson-Makuen was elected president of the American Laryngological, Rhinological and Otological Society at the meeting in Atlantic City, June 3.——Drs. Ferdinand Lessing and Albert P. Brubaker have sailed for Europe.——Dr. Allen J. Smith, dean of the Medical School of the University of Pennsylvania, received the degree of LL.D. at the exercis[illegible] opening of the Medical School Building of [illegible].——Dr. Milton B. Hartzel received the degree of LL.D. at the commencement exercises of the State College.——Dr. Charles E. G. Shannon has been appointed assistant attending ophthalmologist to the Philadelphia General Hospital.

RHODE ISLAND

Library Cornerstone Laid.—In the presence of a notable gathering of the medical fraternity of Rhode Island, the cornerstone of the new library of the State Medical Society was laid June 1. Addresses were made by Dr. G. Alder Blumer, New Haven, Conn., and the presiding officer, Dr. Frank L. Day, Providence, who laid the cornerstone.

State Society Meeting.—The ninety-ninth annual meeting of the Rhode Island Medical Society was held in Providence, June 1, and the following officers were elected: president, Dr. Frederick T. Rogers, Providence; vice-presidents, Drs. Alexander B. Briggs, Ashaway, and John W. Keefe, Providence; secretary, Dr. Stephen A. Welch, Providence (re-elected), and treasurer, Dr. Winthrop A. Risk. Dr. G. Alder Blumer delivered the annual address entitled "A Plea for the Medical Library." At the annual dinner of the society, Dr. Arthur Hollingworth, Providence, acted as toastmaster and Dr. Shattuck, Boston, made an eloquent appeal to arouse interest and support for the library.

GENERAL NEWS

Honors to Surgeon-General.—Surgeon-General Charles F. Stokes, U. S. Navy, delivered the valedictory address at the commencement exercises of Jefferson Medical College, Philadelphia, June 5. On this occasion the college conferred on Surgeon-General Stokes the degree of LL.D. and on the following day Columbia University, New York City, gave him the degree of D.Sc.

Orthopedists Elect Officers.—At the annual meeting of the American Orthopedic Association, held in Cincinnati, May 15-17, under the presidency of Dr. Albert H. Freiberg, Cincinnati, the following officers were elected: president, Dr. Virgil P. Gibney, New York City; vice-presidents, Drs. George B. Packard, Denver, and T. Halsted Myers, New York City; secretary, Dr. Ralph R. Fitch, Rochester, N. Y.; and treasurer, Dr. Gwilym G. Davis, Philadelphia. The next meeting will be held in New York City in May, 1912.

Southern Railway Surgeons Meet.—The sixteenth annual meeting of the Association of Surgeons of the Southern Railway was held in Charlotte, N. C., May 29-30, and the following officers were elected: president, Dr. John H. Mitchell, Mount Vernon, Ill.; vice-presidents, Drs. Robert L. Gibbon, Charlotte, N. C., Reuben T. Ramsey, Elba, Va., Francis A. Webb, Calvert, Ala., and Walter R. McKinley, Columbus, Miss., and secretary and treasurer, Dr. Jacob U. Ray, Woodstock, Ala. Surgeon Charles P. Wertenbaker, U. S. P. H. and M.-H. Service, delivered an address on "Railroad Sanitation."

Medical Milk Commissions.—The fifth annual meeting of the American Association of Medical Milk Commissions was held in Philadelphia, May 23-24, under the presidency of Dr. Milton J. Rosenau, Boston, coincident with the Philadelphia Milk Show, May 20-27, and the meeting of the Certified Milk Producers' Association, May 22-23. Louisville was selected as the place of meeting for 1912. Dr. Henry Enos Tuley, Louisville, was elected president, Dr. Samuel McC. Hamill, Philadelphia, treasurer, and Dr. Otto P. Geier, Cincinnati was reelected secretary.

Award of Marie Feodorovna Prizes.—The American Red Cross announces, in connection with the International Conference of the Red Cross, which will be held in Washington, D. C., May, 1912, that the Marie Feodorovna prizes will be awarded. These prizes represent the interest on a fund of $51,000 which the Dowager Empress of Russia established about ten years ago for the purpose of diminishing the suffering of the sick and wounded in war. Prizes are awarded at intervals of five years and at present are of the following value: one of $3,600; two of $1,530 each; and six of $510 each. The topics selected for the competition are:

1. Organization of evacuation methods for wounded on the battle field, involving as much economy as possible in bearers.
2. Surgeon's portable lavatories for war.
3. Methods of applying dressings at aid stations and in ambulances.
4. Wheeled stretchers.
5. Support for a stretcher on the back of a mule.
6. Easily portable folding stretcher.
7. Transport of wounded between men of war and hospital-vessels and the coast.
8. The best method of heating railroad cars by a system independent of steam from the locomotive.
9. The best model of a portable Roentgen-ray apparatus, permitting utilization of *x*-rays on the battle field and at the first-aid stations.

The chief prize will be awardeu for the best solution of any of the subjects in question. Further information may be obtained by addressing the chairman of the exhibit committee. American Red Cross, Washington, D. C.

Circular on Acute Epidemic Poliomyelitis.—The American Orthopedic Association and American Pediatric Society have issued a circular addressed to health authorities and boards of health on anterior poliomyelitis. This circular states that the disease is communicable from one patient to another, and also by a third person; that it occurs in epidemics and tends to spread along the lines of travel; that there is reason to believe that it is prevented from spreading by quarantine and that in the opinion of the associations it should be a reportable disease. It further stated that abortive cases are of particular significance; that they are, undoubtedly, a source of infection and that their study is of much importance. In cases of infantile paralysis, other cases of illness with sudden onset of fever and meningeal symptoms should be closely watched and regarded as suspicious. All kinds of infantile paralysis should be strictly quarantined, the sputum, urine and feces being disinfected, and the same rigid precautions adopted as in scarlet fever. The quarantine should last four weeks, in the absence of definite knowledge as to when the infection ends. Children from infected families should not be allowed to go to school until the quarantine is raised. The transportation or transfer of patients in the acute stage of the disease in public conveyances should be strictly forbidden. It would be desirable to adopt provisional quarantine measures as regards suspicious cases when an epidemic prevails in a community. All cases should be reported to the public health authorities and all deaths from this cause properly described and registered. The committee, in conclusion, advises that public health authorities make a careful study of epidemics.

FOREIGN NEWS

Physiology at High Altitudes.—The scientific laboratories on Monte Rosa, named after the late Prof. A. Mosso, of Turin, will be opened for scientific research on and after July 15, this year. There are sections devoted to physiology, botany, physics and microbacteriology, and there are nineteen posts open to research workers from all the countries or institutions which contribute to the support of the institution. Applications for reservation of a place must be sent to the director, Dr. A. Aggazzotti, Corso Raffaello 50, Turin, Italy, not later than July 1, with specifications as to the subject of research and the credentials from the government or institution.

Influence of Occupation on Development of Female Diseases.—The *Staatsministerium* in Bavaria has issued an official appeal to physicians suggesting that in all case-histories hereafter the occupation and the special trade, in particular, shall be briefly noted. It states that the influence of the occupation on development of female diseases must be studied more closely as women are becoming wage-earners in constantly larger proportions. The data accessible on this subject are not sufficient at present on which to base general conclusions. The appeal is signed by Dr. Koelsch of Munich, the medical official in the *Staatsministerium* in charge of industrial matters in Bavaria. He adds that the material already on hand to date in the various university clinical institutions might be utilized for graduation theses, and he offers his services to supply the writers with social-technical information as desired. The appeal is being published in the current German gynecologic and general medical journals, as, for instance, in the *Monatsschrift für Geburtshülfe und Gynäkologie*, April, 1911, p. 514.

Pneumonia and Phthisis in the Transvaal.—According to a report by Dr. G. D. Maynard, an inspector of the health department, Johannesburg, on the mortality among natives employed in the mines and on other work in the Transvaal, the most frequent causes of death are pneumonia and pulmonary tuberculosis. The fact is also revealed that the death-rate from these diseases among the natives recently arriving from the northerly or more tropical regions is considerably higher than among those coming from south of latitude 22 degrees S Among the East Coast natives who have not completed one month at work, pneumonia accounts for 443 per 1,000 of all deaths during the first month, while only 97 per 1,000 deaths are due to tuberculosis. At the end of a year, however, tuberculosis accounts for approximately 300 per 1,000 deaths. The conclusions of the report are that the general death-rate among all natives, tropical and others, shows a marked decrease during the first eighteen months at work. The pneumonia death-rate is at least three times as high during the first six months as it is in the second year. Tuberculosis becomes relatively more important as the length of residence in the mining districts is increased, but in spite of this, the general death-rate shows a marked falling off in magnitude.

Deaths Abroad.—In addition to those mentioned by our foreign correspondents, the following are among the prominent men who have recently died: Major Lamb, I.M.S.; University of Glasgow, Scotland, 1890, whose work in connection with the investigations of the action of Indian snake venoms has brought him just renown; died in Edinburgh, Scotland, April 13, aged 42.——V. Cozzolino, professor of ear diseases at the University of Naples, died April 18, aged 58. He has taken a leading part in late years in the campaign against tuberculosis and in the training of deaf-mutes, his last work being on this subject. He offered a prize to be awarded at the next International Congress on Otology, which is to meet at Boston in 1912, for the best work on the various aspects of lesions of the middle ear, inducing insidious, progressive deafness and tinnitus.——R. Binswanger, of the Kreuzlingen, Switzerland, sanatorium for mental diseases, founded by his father and now carried on by his sons, recently succumbed to coronary sclerosis, at the age of 61. The Binswanger family has always stood as pioneers for the principle that occupation and intercourse with the well are most important elements in treatment of mental disease. Binswanger also took a prominent part in local and national politics when matters of public moment were involved.——H. Naegli-Akerblom, privat-docent of the history of medicine, died at Geneva, Switzerland. He was born at Rio de Janeiro but has spent his life in Switzerland.——E. Hagnauer, a leading ophthalmologist at Valparaiso, Chili, of Swiss parentage, succumbed recently to angina pectoris, aged 48.——Don J. Aparici, director of the army hospital at Alcala in Spain, recently succumbed to blood poisoning from a scratch during an operation.——G. Haarmann, mayor of Witten, Prussia, since 1890, who had served several terms as member of the imperial and national legislatures, died at Witten, aged 63.

LONDON LETTER

(From Our Regular Correspondent)

London, June 3, 1911.

National Insurance Bill

In my last letter to The Journal I stated that the profession was thoroughly roused to the great danger to its interests of the national insurance bill. Evidence of this fact is increasing on all sides. Both the medical and the lay press are deluged with letters from angry physicians. A special representative meeting of the British Medical Association lasting two days and sitting on the first day from 10 a. m. until midnight has been held. Absolute unanimity obtained on all important points. The representatives agreed that there must be no control of the physicians by the friendly societies, that there must be a free choice of physicians, that a wage limit for medical attendance of $10 per week must be adopted, and that medical representation must be adequate on the controlling bodies. On the second day the Chancellor of the Exchequer, Mr. Lloyd-George, attended at the morning session for the purpose of hearing the views of the representatives and conferring with them. The proceedings were of the nature of a running conversation. He declared that the whole-hearted support of the profession was necessary for the success of the bill. He was quite in favor of the free choice of physicians. He said that an advisory committee to assist the insurance commissioners would be set up after the passage of the bill when regulations would be framed for medical service, and there would then be ample time for consideration of details. At least one of the insurance commissioners will be a doctor. He was in favor of the freedom of physicians from control by the friendly societies, and for vesting all charges for medical benefits in the local health committees. With regard to the rate of payment, the bill did not dictate this and it would be dealt with by the insurance commissioners. With regard to the income limit he held out no hope that the proposal to fix the limit at $10 per week could be accepted by the House of Commons. Large bodies of skilled workers such as coal-miners and engineers had wages above that and at present were admitted to the friendly societies. No member of the House of Commons, unless a representative of one of the universities, would dare to propose their exclusion. It is on this question of a wage limit that the government will have the greatest difficulty in coming to an agreement with the profession. Probably all other questions can be settled by arrangement, but the wholesale conversion of private into contract practice is abhorrent to the profession, which is thoroughly united on this point. The British Medical Association has 22,000 members, which is somewhat more than half of the profession, and it represents the whole profession in the stand which it is making against the objectionable provisions of the bill. In response to a circular physicians are joining the association in unprecedentedly large numbers for the purpose of fighting the bill. Following the meeting of the representatives of the divisions of the association a mass-meeting of the profession, members and non-members, was held in London. It was attended by about 1,500 doctors and was the largest meeting ever held to consider a medico-political question. On the platform were many of the leaders of the profession: Mr. Butlin, president of the association, and also president of the Royal College of Surgeons, Sir Thomas Barlow, president of the Royal College of Physicians, Sir Victor Horsley and others. The meeting was most enthusiastic, and heartily endorsed the program of the representatives of the association. It was pointed out that if physicians presented a united front all the threatened dangers of the bill could be averted, for no matter what laws were passed their consent to the working of them was essential. Great hostility was displayed to any scheme that would place the profession under the heel of the friendly societies and one speaker was loudly cheered when he went much further and declared that the opportunity had now arisen for abolishing the system of contract practice entirely. A resolution was carried unanimously not to take part in the working of any scheme which had not previously been accepted by the British Medical Association. The only resolution on which there was any difference of opinion was that fixing the wage limit at $10. A small minority voted against this because they would have liked to go still further and fix the limit at $6. The chancellor seems to have made the mistake of imagining that because the contract system was already in vogue all it had to do was to fix the rate a little higher and be regarded as a benefactor by the profession. He was not alive to the fact that the contract system is strongly disliked and is merely tolerated. This bill has done one thing which seemed previously impossible—thoroughly united the whole profession.

Removal of Physicians from the Register for Working with Unqualified Persons

Sandow, who started as a strong man, has undergone an evolution not altogether respectable; he has passed through the stages of teacher of gymnastics and physical culture and finally has become a quack. He has established a most successful business termed the Sandow Curative Institute, to which patients are attracted by all the unscrupulous arts of the nostrum exploiter. Whole-page advertisements filled with the usual blatant humbug promising to cure all sorts of diseases have secured for him the subservience of our venal press, evidenced in disguised puffs in the form of leading articles. Even certain doctors of some standing have, I regret to say, been induced to write articles on the benefits of physical culture in general and Sandow's system in particular. But Sandow has at last gone too far. He engaged three doctors at a salary for the purpose of examining patients to ascertain whether they were fit to undergo the exercise. These doctors have now been prosecuted before the General Medical Council by the British Medical Association for associating themselves in a professional capacity with an institution which systematically advertises for the purpose of procuring patients who are to receive, either by correspondence or attendance, treatment for disease under the personal direction of Mr. Sandow, who is an unqualified person. For the defense it was put forward that the accused doctors took no share of the profits and had no part in the management of the institute. The examinations which they conducted were for the purpose of protecting the public. Sandow also said that, if the doctors should be held to have transgressed the standard of medical ethics so as to render them liable to removal from the register, he was prepared to entrust the prescribing of the treatment according to his methods to the physicians and to cease advertising in the lay press that the Sandow Institute undertakes to cure disease. The Council found the three doctors guilty, but removed the name of only one from the register, and postponed judgment in the case of the other two, giving them time to reconsider their position.

A short time ago I reported the case of a man suffering from tuberculosis of the knee who was treated by Mr. Barker, the well-known bone-setter, under an anesthetic and was obliged subsequently to have his leg amputated. The Council found the doctor who administered the anesthetic guilty and ordered the removal of his name from the register.

The Seventeenth International Congress of Medicine

Particulars as to this congress, which will be held in London, Aug. 6-12, 1913, have been given previously in The Journal, April 8, 1911, p. 1047, May 13, 1911, p. 1404, June 10, 1911, p. 1733. The following officers have been elected: president, Sir Thomas Barlow; secretary-general, Dr. [illegible] 40 Wimpole St. W.; treasurers, Sir Dyce [illegible] G. H. Makins.

The International Association of Medical Museums

At a meeting of pathologists interested in medical museums this organization was discussed. Its objects are the interchange of museum specimens and material for research, the elevation of the medical museum as a teaching medium, and the improvement of museum technic. It maintains an exchange department and an experience department for the interchange of information. The membership is ninety-eight. After discussion the following resolutions were passed: (1) That a meeting of the association be arranged in conjunction with the International Congress on Medicine in 1913; (2) that the three great English medical societies, the Pathological Society, the Anatomical Society and Royal Society of Medicine, be requested to cooperate with special reference to the publication in their journals of news of the department of exchanges, and short reports of meetings; (3) that correspondents be appointed in London to act as local secretaries.

Total Abstinence and Longevity

The seventieth annual report of the United Kingdom Temperance and General Provident Institution is a record of continued progress. The number and amount of new policies are the largest ever issued in one year. In the general section the expected mortality for the quinquennium 1906-1910 was 2,282, and the actual mortality was 1,900 while in the temperance section (confined to total abstainers) the expected mortality was 2,291 and the actual mortality only 1,504. The surplus allows of a reversionary bonus on whole life policies with full profits at the rate of 2.1 per cent. in the temperance section and 1.7 in the general section. The report of the Sceptre Life Association shows a similar result favorable to total abstainers. For the twenty-seven years 1884-1910 the expected deaths in the general section were 3,352 and the actual deaths 2,674 (79.7 per cent.); in the temperance section the expected deaths were 2,311 and the actual deaths 1,124 (52.5 per cent.). But not only here are the figures of the temperance insurers superior over the whole period, but for every quinquennium since 1893 they show an increasing superiority. Thus for the quinquenniums 1894-98, 1899-1903, 1904-08, and the two years 1909-10 the percentage which actual deaths form of expected deaths were in the general section 79.3, 76.9, 80.8 and 80.9, while in the temperance section they were only 54.4, 52.5, 48.4 and 48.4. Thus, while the mortality in the general section shows no decline, the mortality in the temperance section shows a steady fall from 1894 to 1908. This is attributed to a larger number of the assurers in the temperance section being life abstainers and to an increasing number being the children of abstainers.

PARIS LETTER

(From Our Regular Correspondent)

Paris, May 26, 1911.

The New Codex and the Physician's Right of Prescription

The new codex the use of which was made obligatory in 1909 (The Journal, Aug. 29, 1908, p. 772) has modified on a great number of points the old formulas that we were accustomed to use and of which we understood thoroughly the mode of action. Thus, in most of the heroic medicaments our old formulas for tinctures of 1/5 have been modified to 1/10. Other products have been more modified. Thus, in Sydenham's laudanum, two centuries old, wine has been replaced as a solvent by alcohol. Thus it has become a kind of composite tincture which has no longer the same properties as true laudanum. The tincture of iodin, which physicians have been accustomed to employ in the dilution of 1 to 13, has been made 1 to 10, which makes a very caustic drug, all the more that the old tincture was prepared with 90 per cent. alcohol while the new is to be made with 95 per cent. However this may be, these modifications would not at all inconvenience the physician if he were able to prescribe and to obtain for his patient the old preparations, the activities of which he understood perfectly and from which he could obtain therapeutic results. But this is precisely the point of difficulty. The Société de thérapeutique appointed a commission to study the matter. Dr. Albert Robin, who submitted the report of the commission, protested energetically against the narrow and Draconian way in which the new formulas have been made the standard to the exclusion of the old: in fact, the pharmacist has no right to keep in stock the products the formula of which has been modified, and honest pharmacists have several times been criminally prosecuted for merely having in stock, for example, laudanum made according to the old formula. The codex preparation is the one which the pharmacist ought to employ whenever the physician has not specified "old codex:" but if the prescriber has thought it best to give a formula of his own, the pharmacist ought to have the right to prepare in advance the products which enable him to fill prescriptions suitably and rapidly. At the end of this discussion, the society unanimously resolved to request the appointment on the commission of two members of the Société de thérapeutique who would be competent to appreciate the therapeutic properties of drugs.

The Hospital of Beaune

The fine Hôtel-Dieu of Beaune in the department of the Côte-d'Or, founded in 1443, is a magnificent specimen of the art of the fifteenth century. In spite of restorations executed during the last few years by the commission of historic monuments, new and important repairs must be made very soon if this unique monument is to be preserved. A public subscription has, therefore, been opened to cover half of the sum ($20,000 or 100,000 francs) required for the repairs, the other half being furnished by the hospital itself.

Deaths

The deaths are reported of Dr. Arthur Fallot, professor of hygiene and of legal medicine at the Ecole de médecine de Marseille, and of Dr. Bressard, professor of internal pathology at the Ecole de médecine de Poitiers.

Cytodiagnosis in Gastric Diseases

In one of the last sessions of the Société médicale des hôpitaux de Paris, Dr. Maurice Loeper, *agrégé* professor at the Faculté de médecine de Paris, communicated the results of investigations which he made in collaboration with Dr. E. Binet of Vichy, on the cellular elements contained in the lavage liquid of the fasting stomach. In the normal state, except during digestion, one finds in this liquid hardly anything except cellular detritus and ill-characterized nuclear and protoplasmic débris. In cases of gastric ulcer there are found in the same liquid, even in the intervals between hemorrhages, red globules, epithelial cells and leukocytes. In gastritis, one finds white globules of every kind, glandular elements which are quite recognizable and some of which are very granular. The lavage liquid from gastric cancer is rich in large and average-sized cells, strongly colored, very resistant, often multinucleated and very rich in glycogen. Among aerophages and sialophages, one finds a great number of pavement cells from the superior tract. Cytodiagnosis, therefore, is of interest, not only to practical pathology, but also to general pathology, since it permits of the isolation of all latent gastric conditions and even of true mild gastritis from the confused group of the dyspepsias.

BERLIN LETTER

(From Our Regular Correspondent)

BERLIN, May 27, 1911.

Personal

Professor Fritsch, the renowned gynecologist of Bonn, will resign his position, October 1, on account of sickness.

Professor Abderhalden, professor of physiology at the Berlin veterinary college, has received a call to Halle to fill the chair of Professor Bernstein.

Professor Pohl of Prague has been appointed director of the institute of pharmacology at Breslau in place of Professor Filehne.

The successor of Professor Hensen at Kiel is Professor Bethe, first assistant at the institute of physiology at the university of Strasburg. He assumes his duties as director of the institute of physiology at Kiel during the summer semester. This appointment does not lack special interest. It has been a subject of repeated complaint in the *Deutsche medicinische Wochenschrift* that original investigators in physiology received no recognition in the appointments to regular professorships, and that therefore physiology lagged behind in the German universities as compared with those of foreign countries, particularly when compared with the laboratories of America. Among other things the complaint was made that such an investigator as J. Loeb had been allowed to remove to a foreign country and that a talented scientist like Bethe would apparently stay as privat-docent in Strasburg all his life. There is little doubt that this promotion to Kiel has made an impression; at any rate it is a source of satisfaction that an investigator like Bethe has been called to an independent position. He is at present 39 years old.

A few days ago the curator of the university of Marburg, Professor Schmidtmann, died suddenly at the age of 60. Up to April 1 of last year he was a distinguished councillor in the medical section of the Prussian state department of education, and his call to Marburg excited some comment because it was the first time that the position of curator of a university which heretofore has always been in the hands of the management, has been given to a medical man. Schmidtmann belonged to the medical section fifteen years. According to report he left the position on account of his health, but others intimate that he was worsted in a dispute with the head of the medical section and with a colleague in the department. He had performed special services in his ministerial position in connection with water supply and sewage disposal. He was instrumental in founding a government testing laboratory for this department; this employed almost thirty physicians, chemists, botanists, zoologists and experts in water-supply engineering. Among his many literary works is a handbook of legal medicine (*Handbuch der gerichtlichen Medizin*).

Professor E. Remak died suddenly, May 26, at the age of 62. He was the son of the renowned physiologist and neurologist, Robert Remak, one of the most notable pupils of J. Müller and Schönlein. Ernst Remak received his training in neurology as assistant of Professor Westphal at the Berlin Charité. In his special field he published a series of noteworthy articles, on the clinical aspects of tabes, muscle atrophy, and the reaction of degeneration. His larger works include one on the principles of electrotherapy and electrodiagnosis and a monograph on neuritis and polyneuritis in the Nothnagel Collection.

Privy Councillor H. Rehn, the senior of German pediatrists, of Frankfurt a. M., a brother of the well-known surgeon of the same place, celebrated his eightieth birthday, May 20.——Privy councillor Dr. Götz, of Leipsic, who has won great distinction in the development of German gymnastics, was made an honorary doctor of philosophy at Kiel on the occasion of his eighty-fifth birthday.

Bill for Optional Cremation

This bill the fate of which I reported to be very dubious has, contrary to expectations, received the small majority of two votes in the Prussian lower house of parliament. An important factor in this result was the attitude of a part of the conservatives who although they are in other matters noted for their obstructive tendencies in religious affairs, voted for this bill because, as their representative with remarkable candor announced, they were of the opinion that cremation was not opposed to the teachings of the Christian religion or to the principles of the conservative party and had nothing to do with politics. For the final passage of the law it is still necessary that the upper house should approve it and a majority of the members are conservative. Still from the action of the lower house the hope may be entertained that the vote will also be favorable to the bill.

Pay Ward in Charlottenburg

Like Berlin, the city Charlottenburg is contemplating the erection of a pavilion in the city hospital for paying patients of the second class. The expenses of building a ward with fifty beds is estimated at $135,000 (540,000 marks). The charges for care will be placed at $2.00 a day for citizens of Charlottenburg and $2.50 (10 marks) for strangers. The physicians in charge will have the right to fees according to the prices fixed by the medical societies.

International Congress for Infant Welfare

The third international infant welfare congress will assemble this year at Berlin September 11-15. It is under the protection of the empress who has shown the liveliest interest in the movement to combat the mortality of infants. The imperial chancellor has accepted the honorary presidency of the congress and the chairman of the committee on organization is Dr. Bumm, the head of the imperial health office. The various departments include instruction and teaching, practical measures, legislation and general management, guardianship, and statistics. The following papers are provided for the different sections: instruction of physicians in the field of hygiene and diseases of children; instruction and postgraduate education of midwives in the care and treatment of infants; training of nurses for institutions, families and communities; instruction of the people in the care and feeding of infants; care for pregnant and puerperal women; hygienic stations and nursing dispensaries; milk stations and their results; crèches; closed hospitals for the care of infants; asylums and homes; rural infant hygiene; infant hygiene in legislation and administration; motherhood insurance; care of foundlings and illegitimate children; isolation of syphilitic children; production and control of milk for infants; the international relations of guardianship and the Hague convention; the legal procedure to establish the rights of illegitimate children in foreign countries; their legal position in the most important European countries; mortality, morbidity and birth statistics in various countries, and formulation of a uniform scheme for collecting international statistics of infant mortality and statistics of the success of hygienic measures.

No Change in the Vaccination Law

The renewed attempt of our antivaccinationists to secure a change in the vaccination law and especially the introduction of a conscience clause or at least the appointment of a committee to investigate the vaccination question, again has woefully miscarried. After a final debate, a few days ago, all of the proposals were settled by laying them on the table (passing to the order of the day). This was done in spite of the fact that speakers from almost all the political parties expressed themselves in favor of the propositions of the antivaccinationists. But it may be remarked with satisfaction that the majority of our popular representatives took the standpoint of genuine science on this question and did not yield to the agitation of an unscrupulous antivaccination party. That the latter will not be reconciled to this defeat but will continue their agitation and as soon as possible appear before the Reichstag with a new petition, may be regarded as certain.

Protest Against the Principle of "Tag Days"

A number of distinguished persons, prominent in social charities, have made a serious protest against setting aside a day for aid of children's philanthropies by means of the sale of flowers, which I have mentioned in the previous letter. This protest contains the following considerations: "Such arrangements cause more injury than wholesome effect, whatever may be their financial success, for they weaken the sentiment for intentional and well-planned charity and hinder the well-to-do classes, who are able to help, from receiving the education necessary to a deeper understanding and more serious conception of our social relations. The charitable organizations, whose duty it is above all others, to awaken and sharpen the conscience of all classes regarding the evils with which they are especially acquainted, neglect this duty when they use external incitements to arouse a disposition to give which is prompted by no knowledge of the evil itself; they help to lessen the social sense of responsibility rather than to deepen it. For the young girls who assist, the flower day signifies a confusion of their moral and social ideas since it can have no material success without some sort of festivity. Social obligation should mean to them a serious matter which requires the internal devotion of their personality and not a feast which cannot dispense with external excitements and satisfaction. The attempt is being made to prohibit street selling by children. How can we urge this, if in the service of social needs young girls, perhaps even school children, are exposed to these dangers, and especially in the metropolis. Those who need our help will be injured by this kind of alms-collection. We ought to meet their needs with holy earnestness and the help that we wish to bring them should not be made dependent on public appeals which are not conducted with similar seriousness. The giver also is led astray in a certain sense. He ought to give from an honorable sympathy and appreciation of social aid, not in a jovial, festive mood, following the impulse of the moment. In our time with its social trend, the lust for pleasure, frivolity and ambition ought not to be awakened or nourished in securing the necessary means for philanthropic purposes. Other methods must be sought and in the course of experience ways will be found by which the more serious purpose will be awakened and strengthened and will be led to blessed social accomplishments." The justness of these views, in general, certainly cannot be controverted, but how then can the money for the private assistance of public charity be collected, money which is indeed necessary as the state alone cannot support charity, and other methods of getting money, such as bazaars and similar arrangements, are not only objectionable on the same grounds, but have become exhausted in consequence of too frequent employment. For this reason we do not believe that the protest will result in any interruption of the success of the flower days.

VIENNA LETTER

(From Our Regular Correspondent)

Vienna, May 29, 1911.

Medical Wishes for New Laws

Just now a committee of medical men, comprising the representatives of the various Austrian medical organizations, is working in Vienna against the proposed new "public law act," which will be the first thing for the new parliament to deal with. The efforts of the profession are directed towards the elimination of certain clauses and articles contained in the old Codex and taken over into the new act. The following resolutions have been accepted unanimously by the committee and will be forwarded to the government: 1. The profession objects, both in its own interest and in that of the general public, to the obligation to render medical aid in all instances (*Berufszwang*). 2. The profession protests against being dependent on the opinion of lay persons in affairs pertaining to the art of caring for its teaching and its practicing. 3. Physicians protest against the obstacles placed in their way by certain inhuman laws, when they treat and cure patients; especially do they protest against the grotesque condition of absolute professional secrecy imposed by one law, which condition is nullified by other clauses of the same law; also to the law which, under certain conditions, requires a doctor to report to the police a patient who, perhaps, has called the doctor in fear of death. Such a state of affairs converts the doctor into a police agent, and is absolutely abominable and unacceptable for the profession. The special and distinguished position of the medical profession requires a special and distinguished handling of its relations to the public in general. The profession also urgently requests a suitable law against quackery and patent medicine fakes.

The committee resolved to establish central archives for the collection and study of all decisions of a juristic, social, economical and ethical nature, pertaining to the members of the profession or its art. All doctors of the empire will be requested to collaborate in this work and to communicate with this institute also in case of an unjust assessment of rates and taxes of a doctor.

Hypnotic Experiments in Vienna

A series of lectures on hypnotic experiments and similar conditions was delivered some time ago before a lay audience, until the experiments resulted in serious mental derangement of a few persons. The lecturer, a non-medical man, invited those present to come up and allow him to throw them into the state of hypnotic sleep. Whilst he succeeded in doing so, on one night he was unable to remove the spell from one woman. His anxiety caused several other women to faint, and the police had to interfere to prevent further mischief. A similar incident occurred a year or two ago in Budapest, where a young woman died as a result of a hypnotic experiment. Public indignation, as well as scientific protests against such demonstrations, has prompted the police to stop all such lectures. In medical circles it was a matter of severe criticism that no medical association had been asked to pass on the admissibility of lectures of such a nature. The woman referred to above had to be taken into a hospital for nervous diseases for prolonged treatment.

A Remarkable Judgment in Favor of Medical Opinion

Some time ago a patient suffering from caries of the tibia was advised by a surgeon to undergo an operation. He was willing, but on advice of a friend, he declined to do so. The patient died soon afterward, and necropsy revealed that death was due to thrombosis of veins, originating from the affected part. The good friend thereupon was charged with having wilfully prevented the patient from obtaining help and was sent to prison for two months; the judge said that the friend's action was very near intentional murder. The incident will, no doubt, give vantage-ground against quacks, who hitherto have enjoyed a fair amount of indulgence with our courts.

Association News

THE LOS ANGELES SESSION

Other Medical Alumni Reunions

The following announcements have been received, in addition to those already given in The Journal:

A banquet for all University of Pennsylvania Alumni, who may be visiting Los Angeles, during the sessions of the American Medical Association, June 27-30, will be held at the Hotel Alexandria, corner Spring and Fifth Streets, at 6:30 o'clock, Tuesday, June 27. The price for each plate will be $5.00. All "Pennsylvania men" are asked to notify the undersigned immediately of their intention to attend the banquet, and if possible, to send check or money order, inasmuch as some definite idea must be obtained of the exact number for whom provision is to be made.

The banquet will be addressed by some of America's greatest physicians and surgeons, graduates of "Old Penn", and an enthusiastic and worth-while time is promised. It is further suggested that each alumnus forward the year of his class.

T. Perceval Gerson, M.D.
1011 W. P. Story Building, Los Angeles.
Secretary and Treasurer, University of Pennsylvania Alumni Society of the Pacific Southwest.

The alumni of Rush Medical College will meet at a smoker and reunion on alumni night, June 27, 1911, at Casaverduga at Glendale. Special cars will convey the alumni to the place of meeting. Further information will be furnished at the place of registration.

B. M. Linnell, M.D., 32 N. State Street, Chicago.

Miscellany

Qualities of Chinese Medical Students.—Jeffreys and Maxwell, in their book on "Diseases of China," state: "The native Chinese has many qualifications for making a worthy practitioner of scientific medicine, and, like the Japanese, may be depended on to enhance the honor of our great profession by adding the strength of native talent to the sum total. We find the following characteristics exemplified among our students and assistants and have reason for believing that they represent the average of the best: excellent memory for facts and detail; faithfulness in carrying out methods once adopted; marked powers of observation; and the most extraordinary devotion to the principle of hard work that we have ever seen among any people; great delicacy in all operations involving the use of the hands, and particular fitness for, and adaptability to, the intricate and time-consuming problems of original investigation, and especially the use of the microscope. We have had students to whom the microscope became the recreation of life and to whom the power of observation was apparently a part of Nature. On the other side of the account we must write down a considerable shortage in the matter of professional judgment and in ability to organize, control and discipline their own subordinates; a tendency to do the operation as laid down in the book without balanced application to the individual; and an overwhelming tendency on the part of some to adopt the methods of quackery and charlatanism. But we must guard this statement by emphasizing the fact that this is only applicable to individuals and that it is merely more prominent as a fault than among our own fellow-countrymen. We have the highest respect for our own assistants, who never fail in courtesy, in loyalty or in application. The day will come when they must take their place as chiefs, as colleagues on an equal footing with ourselves, when they must take on themselves the burden of directing the ministry of medicine among their own people; and we face it with considerable confidence."

Heredity and Epilepsy.—The field workers of the New Jersey State Village for Epileptics (Thirteenth Annual Report, Oct. 31, 1910) in a canvass of thirteen counties of the state, found in the families of 137 patients, 328 epileptics, or an average of 2.4 for each family. The total number of defectives charted was 1,253. Inheritance was found as follows: alcoholic, 69; blind, 18; Bright's disease, 22; cancer, 27; criminal, 5; deaf, 25; epileptic, 57; feeble-minded, 29; insane, 37; migraine, 12; neurotic, 30; paralysis and apoplexy, 43; suicide, 9; syphilis, 4; and tuberculosis, 75. Of 30 children whose fathers or mothers are patients at the institution, 6 are epileptic, 2 feeble-minded, 2 insane, 3 died in infancy, 3 neurotic, 1 tuberculous, 4 undetermined and 9 normal, some of whom may develop epileptic seizures later in life, or have a mental breakdown under stress of harsh conditions. The charts also show that in instances in which the parents are both epileptic or feeble-minded, or one epileptic and one feeble-minded, all the children will be either feeble-minded or epileptic. A study of the charts of the most completely known pedigrees indicates that the normal parents of epileptic offspring have come from families with defective ancestry. With the fact established that heredity plays a large part in the production of these defectives, the report emphasizes the fact that the state should protect itself by the passage of laws that will prevent reproduction of other epileptics. This may be accomplished in one of two ways: either by placing under permanent custodial care, or by sterilization of all epileptics. Concerning the use of the continuous bath in the institution, it is stated that the cases selected for treatment in the continuous bath were those of status epilepticus, serial attacks, postepileptic mania, circular insanity and hysteria major. The results obtained have been gratifying, and were obtained more rapidly than when medicinal agents were employed, and without the after-effect and depression which accompany the use of drugs. The patient usually went into a natural sleep, and awakened refreshed in body and mind, and without digestive disturbances, which generally follow medicinal treatment. In brief, it might be said of the use of the continuous bath, that it has the following advantages over medicinal remedies: It is applicable to all cases; the results are rapidly and uniformly obtained; it is always under control; it is easily administered; it has no bad after-effects; the respiratory system is unaffected; the digestion is not disturbed; the circulatory system retains its equilibrium, and the bath may be continued over a long period of time without depression.

Civil Responsibility of the Surgeon.—"Whatever you do, don't leave a sponge or anything else in the abdomen of your patient," exclaims P. Raugé in an article quoted in the *Gazette Médicale Belge.* "That is the unpardonable sin from the standpoint of the public," he declares, "and it may lead to the direst consequences, as witness the case of Professor Bazy, the irreproachable clinician, the skilled operator and the most conscientious of men." (The case was mentioned in the Paris Letter, Jan. 14, 1911, page 130.) "If he had made a mistake in diagnosis or blundered in operating, no one would have complained, but to leave two compresses in the abdomen! The patient, the crowd, the daily papers, the lawyers and finally the judge all take up the cry and condemn the surgeon. If they didn't, what might not surgeons leave in the abdomens of their patients! It is not to be taken into account, naturally, that the operation saved the life of the patient and that she has been in excellent health since and that the passage of the compresses never caused her the slightest disturbances during their alleged silent progress into the intestine and alleged final evacuation. But here they are at last, and Bazy is confounded. The operation was done at the public hospital, free of charge, and the fine of $1,000 imposed on the surgeon was not for damages but to serve as a lesson to him and to all surgeons to 'go and sin no more. And consider yourself fortunate to get off so easily.' The decision in this case is a slap in the face for the entire medical profession. It says plainly that our skill and our conscientiousness no longer suffice to guide us in our professional conduct. We need judges to warn us of our deviations from the straight path of rectitude and show us the right road." "No, and never," he exclaims in conclusion, "do we need such warnings from outside. Our conscience is our guide and mentor, and the public, holding us to such a strict account, can never know the anguish we experience over a dubious diagnosis, a difficult decision, an emergency operation, hoping against hope. And the judges who condemn us might be less severe if they stood beside a sick or dying man with their bistoury in hand. They would appreciate then what medical responsibility really is, and they would understand then, perhaps, that we have to sustain and guide us in our practice something better and higher than the dread of a suit for malpractice."

Diploma Mill Wanted.—The following amusing letter is quoted from the *Rush Alumni Association Bulletin:*

> Dr. Christian Fenger, Dear Sir:—Please accept of My hand writting though I hav'nt been in touch with you as to write you before.
>
> But at this time I write you for a Diploma of being a family Doctor. I have purchased a family Medical Book from Sears Roebuck and I have Studied it for two (2) years and I have been Examined by Doctor ——— and I Desires to Give Rush Medical College Honor for what I know, and that is why I asked for a Diploma from that College. I have been Teaching for twelve (12) years and I believe I am Prepaired to do the work. I will give you One Dollar and a half ($1.50) for the Diploma if you will Except of My request Please let Me hear from you by return Mail.

Two Facts Regarding Vaccination.—In the Philadelphia *Public Ledger*, May 21, is a letter from Dr. W. W. Keen, in which he presents some facts regarding vaccination against small-pox and typhoid fever. What he states regarding small-pox vaccination is worth quoting: "One of my old students at the Jefferson Medical College, Dr. Victor G. Heiser, is in charge of the sanitation of the whole of the Philippine Islands. He has accomplished there a work which can be favorably compared with that of Colonel Gorgas on the isthmus. When in this city about eighteen months ago he told me that in seven provinces in and around Manila there were annually about 6,000 deaths from small-pox, which would mean 25,000 to 30,000 cases every year. But in the twelve months following the completion of the vaccination of all the population, there was not a single death from small-pox in the same provinces. Could there be a better demonstration of its value as a preventive? Moreover, he stated that in over 5,000,000 vaccinations in the Philippines, in spite of their frequent neglect of the slight sores which are necessarily produced by the operation, and of the uncleanly habits of a large number of the inhabitants, not one single death had occurred, the finest record of any similar wholesale vaccination in the world. In your issue for May 7, also, in the first page of the Magazine Section in Professor Turner's paper on the 'Abolition of Slavery in Pennsylvania,' are published facsimiles of some advertisements which appeared in Philadelphia before the days of vaccination. Among them is one which to-day would be utterly absurd. It reads 'Lately imported from Antigua (as though they were cigars or coffee) and to be sold . . . a parcel of likely negro women and girls from 13 to 21 years of age, who have all had the small-pox.' Such an advertisement at the present day would be unthinkable. It added to the value of a slave in those days to have had small-pox. To-day nobody thinks of any one ever being liable to small-pox, except those who neglect vaccination. I commend this experience of Dr. Heiser in the Philippines and this advertisement from your paper to the attention of our antivaccination friends."

Arteriovenous Anastomosis for Senile Gangrene.—J. Abalos adds another to his previously reported case of this kind. In his first patient the disturbance reappeared three weeks after the anastomosis, and amputation became necessary. In the present case the patient was a man 68 years old, free from morbid antecedents but a great smoker. One leg had been amputated, six months before, for gangrene commencing in the foot, and one toe of the remaining leg was now developing gangrene. The femoral vein and artery were then sutured, end-to-end, under local anesthesia. The blood poured at once into the vein but was arrested by a coagulum. The vein was consequently opened 1 cm. below the anastomosis, the coagulum presenting in the slit, and it was promptly expelled by the pressure of the blood behind, after which the vein was sutured. The functional results have been perfect to date of writing, twenty-four days after the anastomosis. The gangrene seems to have been arrested and the toe will soon be amputated. The case is reported in the *Semana Medica*, 1911, xviii, 629.

Disease and Longevity.—"Man's constitution shows that he is a long-lived being. For his development there must have been a period when the natural span of life was more fully realized than in the recent past. Disease in its present forms is a result of historic conditions. Especially is this true of the great epidemics that have so much shortened life. Filth comes mainly through overcrowding; contagious diseases could not have antedated it. When the world was sparsely populated and the natural surplus large, a mature old age must have been the general expectation. Infant mortality was doubtless large; but this would not have much influence on social organization if this dangerous period was followed by a long period of vigorous manhood. Old age would also, as with animals, quickly lead to death. The young and vigorous would thus set the pace and shape social and religious usage. Then youth and vigor were long and old age short; now, youth is but a passing moment and old age an enduring, hopeless epoch. With us the senile hand is on every institution and influences every social event. It is not to be wondered that religion has reflected this change and has become a thing of age and grief." (From Patten's "The Social Basis of Religion," New York, 1911.)

Poisoning from Bite of Spider.—S. Mazza of Buenos Aires has made a special study of the nervous and cutaneous manifestations of poisoning from the bite of spiders or arachnoidism, and in the *Semana Medica* (1911, xviii, 641), reports a case in which there were eruption and desquamation resembling that of scarlet fever. The syndrome was differentiated principally by the necrotic lesion at the point of the bite and the intense pain that accompanied it. In some points the syndrome resembled malignant pustule, while the hemorrhagic jaundice and prostration in some cases suggested yellow fever at first. There was no epistaxis or hematuria in his last case, as in infectious purpura, and the spleen was not enlarged, while there was a 3 per cent. eosinophilia. The patient was a boy of 10 who had had scarlet fever some years before. Pino's patient was a man and besides the eruption, fever and vomiting there were also hematuria and jaundice. Both patients recovered. The case reported here with numerous illustrations is Mazza's fourth case of severe arachnoidism.

Syphilis and Tuberculosis.—When a consumptive is already much reduced by the mixed infection of advanced phthisis, his constitution is too greatly undermined to endure the addition of still another infectious process. He is, moreover, in no condition to stand vigorous antisyphilitic medication. When, on the contrary, a person in the third stage of lues becomes smitten also with tuberculosis, his lungs resist the destructive tendency of the latter process because probably of the tendency to fibrosis manifested in the late period of lues. In many cases the general health does not seem seriously impaired in this stage, or at all events so reduced as to render it incapable of offering some degree of resistance to the tuberculosis.—R. H. Babcock, in *Interstate Medical Journal.*

Treatment of Neurasthenia in Children.—The treatment of the neurasthenic boy or girl resolves itself, according to C. Riviere, in the *Practitioner*, into the removal of the cause, whether over-pressure or want of sleep, or both. Change to country air and country pursuits, with cheerful company and a quiet life, will generally complete the cure in these cases unless the damage done is of considerable extent. An open, dry locality should be chosen, with much sun and little foilage, so that abundant time may be spent out of doors. Long hours in bed must be provided, cold bathing is useful, and the work of the digestive organs must be studied. In cases in which nutrition is very low a full Weir-Mitchell treatment may be advisable or necessary.

Skin Fixation in Cancer of the Breast.—H. M. Rigby states in the *Practitioner* that of the physical signs the most important, in his opinion, is the tethering of the skin at some point overlying the tumor. When this is present the diagnosis of cancer, he believes, is almost certain. The skin need not actually be dimpled or retracted. The abnormal fixation of the subcutaneous tissues can often be detected some time before the growth has actually approached the surface of the breast. An acute inflammatory condition may certainly cause some fixation of the skin due to infiltration of the subcutaneous tissue. But with this can generally be seen other signs of inflammation, some discoloration of the skin, edema and local heat. Actual dimpling of the skin is diagnostic of cancer.

Annular Stricture of Rectum.—This type of stricture is usually due to traumatism, simple ulceration, tuberculosis or dysentery; it begins abruptly and usually surrounds the entire rectum; it is movable when the patient is squatting or in a semiprone position; there is a sulcus around it into which a probe or bougie is much more liable to pass than into the caliber of the stricture; there is always mucous discharge, ulceration and secretions which are less than in tubular strictures. It is this type of stricture that follows acute or tuberculous ulceration of the rectum chiefly.—J. P. Tuttle, in *Boston Medical and Surgical Journal.*

"Are Soon Parted."—One is reminded of the old proverb ending in these words on reading that the board of health at Mannheim, Germany, has felt obliged to issue a warning to the public not to send 75 cents in response to certain advertisements in the lay papers offering a cure for snoring. The applicant receives for his money merely a strip of gummed paper with the directions to glue it over his mouth.

Marriages

CHARLES R. MITCHELL, M.D., Paterson, N. J., to Miss Kathleen O'Meara of Fallowfield, Ont., in New York City, April 26.

WILLIAM EDWARD BANNEN, M.D., New Albia, Ia., to Miss May James of LaCrosse, Wis., June 1.

JAMES LINCOLN HUNTINGTON, M.D., Boston, to Miss Sarah Higginson Pierce of Brookline, Mass., June 1.

AUGUST FERDINAND RIES, M.D., Baltimore, to Miss Fannie Morris Gardner of New Rochelle, N. Y., February 16.

CHARLES F. KUHN, M.D., to Miss Ella Meinke, both of Detroit, May 31.

FRANK CLIFFORD ARD, M.D., Plainfield, N. J., to Miss Idah Catherine Chappelle of Rivervale, N. J., June 5.

WALTER ESTELL LEE, M.D., Philadelphia, to Miss Margaret Gordon of Germantown, Philadelphia, June 14.

EARL JOHN BYERS, Chicago, to Miss Ruth Birge of Grand Rapids, Mich., May 24.

ALBERT M. DUNLAP, M.D., to Miss Eva Wyman, both of Boston, June 1.

Deaths

Joseph Price, M.D., a pioneer in American gynecology and abdominal surgery and one of the most prominent specialists of Philadelphia; died, June 6, four hours after an operation for acute suppurative appendicitis, aged 58. He was born in Rockingham County, Va., Jan. 1, 1853; took his medical course in the University of Pennsylvania and was graduated in 1877. From the time of his graduation he devoted himself to surgery and gynecology and, with Dr. Penrose, founded the Gynecean Hospital and later on succeeded Dr. William Goodell as head of the Preston Retreat. He was a member of the American Medical Association and of the American Gynecological Society, and was a very powerful and trenchant contributor to the literature of his specialty. Although an invalid and confined to the house for two weeks, as the result of overwork, he rose from his bed and operated on a girl patient for appendicitis at the Price Private Hospital. Four hours after this operation he collapsed and, although immediate appendectomy was performed, he did not rally and died four hours later.

Samuel Erskine Maynard, M.D. University of Vermont, Burlington, 1891; a member of the American Medical Association and New England Association of Railway Surgeons; formerly president of the Burlington Clinical Society; one of the best-known practitioners of Burlington, Vt.; division surgeon of the Rutland Railroad and surgeon of the Central Vermont System; professor of gynecology in his alma mater and formerly adjunct professor of theory and practice of medicine and physical diagnosis in the same institution; surgeon to the Mary Fletcher and Fannie Allen Hospitals; died in the Mary Fletcher Hospital, May 26, a day after an operation for appendicitis, aged 42.

Edwin R. Phillip, M.D. University of Michigan, 1861; College of Physicians and Surgeons, New York City, 1866; emeritus professor of gynecology in Hamline University; a member of the Minnesota State Medical Association; surgeon of the Vermont Volunteers during the Civil War; for more than forty years a practitioner of Minneapolis; died in St. Barnabas Hospital in that city, May 31, aged 78.

Everard A. S. Carrington, M.D. College of Physicians and Surgeons, Boston (Mass.), 1907; McGill University, Montreal, 1909; afterward a student in the Liverpool School of Tropical Medicine; a member of the staff of the Public Hospital, Georgetown, Barbadoes, W. I.; died Oct. 15, 1910, after an operation for appendicitis, aged 30.

Augustus J. Lyons, M.D. Baltimore (Md.) Medical College, 1896; since 1901 superintendent of the Second Hospital for the Insane of West Virginia, Spencer; local surgeon of the Baltimore and Ohio System; formerly chairman of the committee of health of Parkersburg; died at his home in Spencer, June 1, from quinsy, aged 38.

Albert Stead Green, M.D. Northwestern University Medical School, Chicago, 1878; a member of the American Medical Association; consulting physician to the Rockford, Ill., Hospital; died at his home in that city, June 1, from heart disease following an attack of influenza, aged 58.

Horace Brand Cole, M.D. Baltimore (Md.) Medical College, 1893; a member of the Missouri State Medical Association; for six years a member of the Sedalia Board of Education and staff physician of the Maywood Hospital; died in that institution, June 3, from typhoid fever, aged 49.

James A. Hall, M.D. College of Physicians and Surgeons, Keokuk, Ia., 1880; a veteran of the Civil War; for twenty-five years a practitioner of Miltonvale, Kan., and postmaster of that city for ten years; died at his home, May 30, from chronic interstitial nephritis, aged 65.

Marcus Ray Peck, M.D. New York University, New York City, 1890; of Colville, Wash.; surgeon to Stevens County Hospital; formerly local pension examining surgeon, and surgeon of the San Francisco and Northern Railroad; was found dead in his bed, May 19, aged 43.

Emma Wilson Mooers, M.D. University of Michigan, Ann Arbor, 1884; a member of the American Medical Association; curator of the neuropathologic department of Harvard Medical School, Boston; died, May 31, from septicemia due to an autopsy wound.

Henry Clay Angell, M.D. Hahnemann Medical College, Philadelphia, 1853; for twenty years professor of ophthalmology in Boston University and the author of several text-books on diseases of the eye; died at his home in Boston, May 27, aged 81.

Abram Miller Henkle, M.D. University of Pennsylvania, Philadelphia, 1873; formerly of Winchester, Va., but for the last twenty-eight years a practitioner of Winter Park, Fla.; died recently at his home in that place, from heart disease, aged 64.

T. G. Greer, M.D. Atlanta (Ga.) Medical College, 1869; one of the oldest practitioners of Roswell, Ga.; mayor of that town for several terms and president of the school board for fifteen years; died at his home, May 21, aged 74.

Charles Herbert Moore, M.D. New York University, New York City, 1888; president of the village of Oakfield, Wis., and, until very recently, president of the school board; died at his home, June 2, from tuberculosis, aged 41.

Washburn Tilson, M.D. Chicago Homeopathic Medical College, 1890; of Lafayette, Ind.; at one time coroner of Tippecanoe County; died at St. Elizabeth's Hospital, Lafayette, May 26, from angina pectoris, aged 45.

John Law, M.D. Northwestern University Medical School, Chicago, 1868; formerly local surgeon for the Colorado Midland Railway, and Surgeon to St. Luke's Hospital, Leadville, Colo.; died in Denver, May 28, aged 66.

Seabron Edward York, M.D. Kentucky School of Medicine, Louisville, 1876; for many years a practitioner of Limestone County, Ala., and for nine years postmaster of Athens; died at his home in that place, May 26.

Ellis G. Roberts, M.D. University of Pennsylvania, Philadelphia, 1884; a member of the American Medical Association; died at his home in Fair Haven, Vt., May 29, from disease of the stomach, aged 61.

Benjamin M. Bond, M.D. Missouri Medical College, St. Louis, 1855; surgeon of volunteers during the Civil War; for many years a practitioner of Bellingham, Wash.; died February 28, from senile debility, aged 84.

Henry M. Crouse, M.D. Western Reserve University, Cleveland, 1856; surgeon of the Fifty-Seventh Indiana Volunteer Infantry during the Civil War; died at his home in Knightstown, May 29, aged 81.

William Nathan Wickwire, M.D. University of Edinburgh, Scotland, 1864; for twenty-five years chief medical officer of the Port of Halifax, N. S.; died at his home in that city, March 31, aged 72.

James C. Holland, M.D. College of Physicians and Surgeons, Keokuk, Ia., 1874; a veteran of the Civil War; formerly of Des Moines County, Ia.; died at his home in Denver, Colo., May 26, aged 70.

Benjamin Perrine Marsh, M.D. Hahnemann Medical College, Chicago, 1875; a member of the U. S. Sanitary Commission during the Civil War; died at his home in Bloomington, Ill., May 30, aged 70.

James Hunter Sale, M.D. University of Nashville (Tenn.), 1870; for many years a practitioner of Galloway County, Ky.; died suddenly at his home in Murray, June 2, from heart disease, aged 74.

Daniel Smith Anderson, M.D. New York University, New York City, 1889, a member of the Medical Society of the State of New York; died at his home in Owego, May 21, aged 45.

Norman Rhinehart Hook, M.D. College of Physicians and Surgeons, Keokuk, Ia., 1874; a veteran of the Civil War; died at his home in Oskaloosa, Ia., June 3, from heart disease, aged 67.

David Smith Hunnewell, M.D. Medical School of Maine, Brunswick, 1866; for twenty-nine years a practitioner of Madison, Me.; died at his home in that city, May 31, aged 71.

Nelson B. Wilson, M.D. Cleveland University of Medicine and Surgery, 1865; in 1870 lecturer on pathology in his alma mater; died at his home in Cleveland in March, aged 87.

Samuel Marmaduke Dent, M.D. Baltimore (Md.) Medical College, 1902; of Riversville, W. Va.; died at the home of his parents in Granville, May 31, from tuberculosis, aged 34.

Henry N. Fair, M.D. Reform Medical College of Georgia, Atlanta, 1870; died at his home in St. Matthews, S. C., May 24, from cerebral hemorrhage, aged 61.

Francis J. Weller, M.D. Harvard Medical School, Boston, 1892; a throat and ear specialist of South Boston, Mass.; died at his home, May 29, aged 49.

Edgar C. Parsons, M.D. Hahnemann Medical College, Philadelphia, 1877; a practitioner since 1874; died at his home in Meadville, Pa., June 1, aged 63.

Van E. De Sashmutt, M.D. University of Maryland, Baltimore, 1854; since 1871 a practitioner of Shelburn, Ind.; died at his home, May 25, aged 79.

James Benjamin Rice, M.D. Detroit (Mich.) College of Medicine, 1901; died in his apartments in Flint, Mich., May 31, from heart disease, aged 46.

Henry E. Walet, M.D. Tulane University, New Orleans, 1890; died at his home in Loreauville, La., April 15, from pneumonia, aged 43.

J. E. Jewell, M.D. College of Physicians and Surgeons, Baltimore (Md.) 1881; of Portland, Ore.; died suddenly at Mount Tabor, Ore., May 24.

John S. Crabtree, M.D. Medico-Chirurgical College of Kansas City, Mo., 1903; died at his home in Collinsville, Okla., May 31.

Theodore L. Myers, M.D. University of Alabama, Mobile, 1870; died at his home in Biloxi, Miss., Sept. 17, 1910, aged 65.

William Delker, M.D. Jefferson Medical College, 1884; died at his home in South Philadelphia, May 31, aged 59.

Jesse L. Conant, M.D. Detroit Medical College, 1881; died at his home in Weiser, Idaho, January 8, aged 80.

David W. Collins, M.D. University of Louisville, 1882; died at his home in Pueblo, Colo., May 25, aged 56.

The Propaganda for Reform

In This Department Appear Reports of the Council on Pharmacy and Chemistry and of the Association Laboratory, Together with Other Matter Tending to Aid Intelligent Prescribing and to Oppose Medical Fraud on the Public and on the Profession

THE SUPREME COURT AND THE FOOD AND DRUGS ACT

The Full Text of the Majority and Dissenting Opinions

MAJORITY DECISION

The United States,
Plaintiff in Error
vs.
O. A. Johnson.
} In Error to the District Court of the United States for the Western District of Missouri.

[May 29, 1911]

Mr. Justice Holmes delivered the opinion of the Court.

This is an indictment for delivering for shipment from Missouri to Washington, D. C., packages and bottles of medicine bearing labels that stated or implied that the contents were effective in curing cancer, the defendant well knowing that such representations were false. On motion of the defendant the District Judge quashed the indictment (177 Fed. Rep. 313), and the United States brought this writ of error under the Act of March 2, 1907 (c. 2564, 34 Stat. 1246).

The question is whether the articles were misbranded within the meaning of Section 2 of the Food and Drugs Act of June 30, 1906 (c. 3915, 34 Stat. 768), making the delivery of misbranded drugs for shipment to any other State or Territory or the District of Columbia a punishable offense. By Section 6 the term "drug" includes any substance or mixture intended to be used for the cure, mitigation or prevention of disease. By Section 8 the term "misbranded" "shall apply to all drugs, or articles of food, . . . the package or label of which shall bear any statement, design or device regarding such article, or the ingredients or substances contained therein which shall be false or misleading in any particular, and to any food or drug product which is falsely branded as to the state, territory or country in which it is manufactured or produced, . . . An article shall also be deemed to be misbranded: In case of drugs: First. If it be an imitation of or offered for sale under the name of another article. Second. (In case of a substitution of contents) or if the package fail to bear a statement on the label of the quantity or proportion of any alcohol, morphin, opium, cocain, heroin, alpha or beta eucain, chloroform, cannabis indica, chloral hydrate, or acetanilid, or any derivative or preparation of any such substances contained therein."

It is a postulate, as the case comes before us, that in a certain sense the statement on the label was false, or, at least, misleading. What we have to decide is whether such misleading statements are aimed at and hit by the words of the Act. It seems to us that the words used convey to an ear trained to the usages of English speech a different aim; and although the meaning of a sentence is to be felt rather than to be proved, generally and here the impression may be strengthened by argument, as we shall try to show.

We lay on one side as quite unfounded the argument that the words "statement which shall be misleading in any particular" as used in the statute do not apply to drugs at all—that the statements referred to are those "regarding such article," and that "article" means article of food, mentioned by the side of drugs at the beginning of the section. It is enough to say that the beginning of the sentence makes such a reading impossible, and that "article" expressly includes drugs a few lines further on in what we have quoted, not to speak of the reason of the thing. But we are of opinion that the phrase is aimed not at all possible false statements, but only at such as determine the identity of the article, possibly including its strength, quality and purity dealt with in Section 7. In support of our interpretation the first thing to be noticed is the second branch of the sentence: "Or the ingredients or substances contained therein." One may say with some confidence that in idiomatic English this half, at least, is confined to identity, and means a false statement as to what the ingredients are. Logically, it might mean more, but idiomatically it does not. But if the false statement referred to is a misstatement of identity as applied to a part of its objects, idiom and logic unite in giving it the same limit when applied to the other branch, the article, whether simple or one that the ingredients compose. Again, it is to be noticed that the cases of misbranding, specifically mentioned and following the general words that we have construed, are all cases analogous to the statement of identity and not at all to inflated or false commendation of wares. The first is a false statement as to the country where the article is manufactured or produced; a matter quite unnecessary to specify if the preceding words had a universal scope, yet added as not being within them. The next case is that of imitation and taking the name of another article, of which the same may be said, and so of the next, a substitution of contents. The last is breach of an affirmative requirement to disclose the proportion of alcohol and certain other noxious ingredients in the package—again a matter of plain past history concerning the nature and amount of the poisons employed, not an estimate or prophecy concerning their effect. In further confirmation, it should be noticed that although the indictment alleges a wilful fraud, the shipment is punished by the statute if the article is misbranded, and that the article may be misbranded without any conscious fraud at all. It was natural enough to throw this risk on shippers with regard to the identity of their wares, but a very different and unlikely step to make them answerable for mistaken praise. It should be noticed still further that by Section 4 the determination whether an article is misbranded is left to the Bureau of Chemistry of the Department of Agriculture, which is most natural if the question concerns ingredients and kind, but hardly so as to medical effects.

To avoid misunderstanding we should add that, for the purposes of this case, at least, we assume that a label might be of such a nature as to import a statement concerning identity, within the statute, although in form only a commendation of the supposed drug. It may be that a label in such form would exclude certain substances so plainly to all common understanding as to amount to an implied statement of what the contents of the package were not; and it may be that such a negation might fall within the prohibitions of the act. It may be—we express no opinion upon that matter—that if the present indictment had alleged that the contents of the bottles were water, the label so distinctly implied that they were other than water as to be a false statement of facts concerning their nature and kind. But such a statement as to contents, undescribed and unknown, is shown to be false only in its commendatory and prophetic aspect, and as such is not within the act.

In view of what we have said by way of simple interpretation we think it unnecessary to go into considerations of wider scope. We shall say nothing as to the limits of constitutional power, and but a word as to what Congress was likely to attempt. It was much more likely to regulate commerce in food and drugs with reference to plain matter of fact, so that food and drugs should be what they professed to be, when the kind was stated, than to distort the uses of its constitutional power to establishing criteria in regions where opinions are far apart. See *School of Magnetic Healing v. McAnnulty*, 187 U. S. 94. As we have said above, the reference of the question of misbranding to the Bureau of Chemistry for determination confirms what would have been our expectation and what is our understanding of the words immediately in point.

DISSENTING OPINION

Mr. Justice Hughes dissenting: I am unable to concur in the judgment in this case, for the following reasons: The defendant was charged with delivering for shipment in interstate commerce certain packages and bottles of drugs alleged to have been misbranded in violation of the Food and Drugs Act of June 30, 1906, Chapter 3915, Stat. 768.

The articles were labeled respectively "Cancerine tablets," "Antiseptic tablets," "Blood purifier," "Special No. 4," "Cancerine No. 17," and "Cancerine No. 1,"—the whole constituting what was termed in substance "Dr. Johnson's Mild Combination Treatment for Cancer." There were several counts in the indictment with respect to the different articles. The labels contained the words "Guaranteed under the Pure Food and Drugs Act, June 30, 1906;" and some of the further statements were as follows:

> "Blood Purifier. This is an effective tonic and alterative. It enters the circulation at once, utterly destroying and removing impurities from the blood and entire system. Acts on the bowels, kidneys and skin, eliminating poisons from the system, and when taken in connection with the Mild Combination Treatment gives splendid results in the treatment of cancer and other malignant diseases. I always advise that the Blood Purifier be continued some little time after the cancer has been killed and removed and the sore healed.
>
> "Special No. 4. . . . It has a strong stimulative and absorptive power; will remove swelling, arrest development, restore circulation and remove pain. Is indicated in all cases of malignancy where there is a tendency of the disease to spread, and where there is considerable hardness surrounding the sore. Applied thoroughly to a lump or to an enlarged gland will cause it to soften, become smaller and be absorbed.
>
> "Cancerine No. 1. . . . Tendency is to convert the sore from an unhealthy to a healthy condition and promote healing. Also it destroys and removes dead and unhealthy tissue."

In each case the indictment alleged that the article was "wholly worthless," as the defendant well knew.

In quashing the indictment the District Court construed the statute. The substance of the decision is found in the following words of the opinion: "Having regard to the intendment of the whole act, which is to protect the public health against adulterated, poisonous, and deleterious food, drugs, etc., the labeling or branding of the bottle or container, as to the quantity or composition of 'the ingredients or substances contained therein which shall be false or misleading,' by no possible construction can be extended to an inquiry as to whether or not the prescription be efficacious or worthless to effect the remedy claimed for it." And the question on this writ of error is whether or not this construction is correct. *United States v. Keitel*, 211 U. S. 370.

What then is the true meaning of the statute?

Section 8 provides:

> "Sec. 8. That the term 'misbranded,' as used herein, shall apply to all drugs, or articles of food, or articles which enter into the composition of food, the package or label of which shall bear any statement, design, or device regarding such article, or the ingredients or substances contained therein which shall be false or misleading in any particular, and to any food or drug product which is falsely branded as to the State, Territory, or country in which it is manufactured or produced."

The words "such article" in this section, as is shown by the immediate context, refer to "drugs" as well as to "food."

"Drugs" are thus defined in Section 6:

> "Sec. 6. That the term 'drug,' as used in this Act, shall include all medicines and preparations recognized in the United States Pharmacopeia or National Formulary for internal or external use, *and any substance of mixture of substances intended to be used for the cure, mitigation, or prevention of disease of either man or other animals.*"

Articles, then, intended to be used for curative purposes, such as those described in the indictment, are within the statute, though they are not recognized in the United States Pharmacopeia or the National Formulary. And the offense of misbranding is committed if the package or label of such an article bears any statement regarding it "which shall be false or misleading in any particular."

But it is said that these words refer only to false statements which fix the identity of the article. According to the construction placed upon the statute by the court below in quashing the indictment, if one puts on the market, in interstate commerce, tablets of inert matter or a liquid wholly worthless for any curative purpose as he well knows, with the label "Cancer Cure" or "Remedy for Epilepsy," he is not guilty of an offense, for in the sense attributed by that construction to the words of the statute he has not made a statement regarding the article which is false or misleading in any particular.

I fail to find a sufficient warrant for this limitation, and on the contrary, it seems to me to be opposed to the intent of Congress and to deprive the act of a very salutary effect.

It is strongly stated that the clause in Section 8,—"or the ingredients or substances contained therein,"—has reference to identity and that this controls the interpretation of the entire provision. This, in my judgment, is to ascribe an altogether undue weight to the wording of the clause and to overlook the context. The clause, it will be observed, is disjunctive. If Congress had intended to restrict the offense to misstatements as to identity, it could easily have said so. But it did not say so. To a draftsman with such a purpose the language used would not naturally occur. Indeed, as will presently be shown, Congress refused, with the question up, so to limit the statute.

Let us look at the context. In the very next sentence, the section provides (referring to drugs) that an article shall *"also"* be deemed to be misbranded if it be "an imitation of or offered for sale under the name of another article," or in case of substitution of contents or of failure to disclose the quantity or proportion of certain specified ingredients, if present, such as alcohol, morphin, opium, cocain, etc.

It is a matter of common knowledge that the "substances" or "mixtures of substances" which are embraced in the act, although not recognized by the United States Pharmacopeia or National Formulary, are sold under trade names without any disclosure of constituents, save to the extent necessary to meet the specific requirements of the statute. Are the provisions of the section to which we have referred, introduced by the word *"also,"* and the one relating to the place of manufacture, the only provisions as to descriptive statements which are intended to apply to these medicinal preparations? Was it supposed that with respect to this large class of compositions, nothing being said as to ingredients except as specifically required, there could be, within the meaning of the act, no false or misleading statement in any particular? If false and misleading statements regarding such articles were put upon their labels, was it not the intent of Congress to reach them? And was it not for this very purpose that the general language of Section 8 was used?

The legislative history of the section would seem to negative the contention that Congress intended to limit the provision to statements as to identity. The provision in question as to misbranding, as it stood in the original bill in the Senate (then section 9) was as follows:

> "If the package containing it, or its label, shall bear any statement regarding the ingredients or the substances contained therein, which statement shall be false or misleading in any particular."

The question arose on this language whether or not it should be taken as limited strictly to statements with respect to identity. It was insisted that the words had a broader range and the effort was made to procure an amendment which should be so specific as to afford no basis for the conclusion that anything but false statements as to identity or constitutents was intended. An amendment was then adopted in the Senate making the provision read:

> "any statement as to the *constituent* ingredients, or the substances contained therein, which statement shall be false or misleading in any particular."

With this amendment the bill was passed by the Senate and went to the House. There the provision was changed by striking out the word "constituent" and inserting the word "regarding," so that it should read:

> "any statement regarding the ingredients or substances contained in such article, which statement shall be false or misleading in any particular."

Finally, it appears, that in conference the bill was amended by inserting the words *"design, or device,"* and also the words *"such article, or;"* and thus the section became a part of the law in its present form—containing the words:

> "any statement, design, or device regarding such article, or the ingredients or substances contained therein which shall be false or misleading in any particular."

It is difficult to suppose that, with the question distinctly raised, Congress would have rejected the provision of the Senate bill and broadened the language in the manner stated if it had been intended to confine the prohibition to false statements as to identity. Reading the act with the sole purpose of giving effect to the intent of Congress, I cannot escape the conclusion that it was designed to cover false and misleading statements of fact on the packages or labels of articles intended for curative purposes, although the statements relate to curative properties.

It is, of course, true, that when Congress used the words "false or misleading statement" it referred to a well-defined category in the law and must be taken to have intended statements of *fact* and not mere expressions of opinion.

The argument is that the curative properties of articles purveyed as medicinal preparations are matters of opinion, and the contrariety of views among medical practitioners, and the conflict between the schools of medicine, are impressively described. But, granting the wide domain of opinion, and allowing the broadest range to the conflict of medical views, there still remains a field in which statements as to curative properties are downright falsehoods and in no sense expressions of judgment. This field I believe this statute covers.

The construction which the District Court has placed upon this statute is that it cannot be extended to any case where the substance labeled as a cure, with a description of curative properties, is "wholly worthless" and is known by the defendant to be such. That is the charge of the indictment.

The question then is whether, if an article is shipped in interstate commerce, bearing on its label a representation that it is a cure for a given disease, when on a showing of the facts there would be a unanimous agreement that it was absolutely worthless and an out-and-out cheat, the act of Congress can be said to apply to it. To my mind the answer appears clear. One or two hypothetical illustrations have been given above. Others may readily be suggested. The records of actual prosecutions, to which I am about to refer, shows the operation the statute has had and I know of no reason why this should be denied to it in the future.

Our attention has been called to the construction which was immediately placed upon the enactment by the officers charged with its enforcement in the Department of Justice and the Department of Agriculture. It is true that the statute is a recent one, and, of course, the question is one for judicial decision. But it is not amiss to note that the natural meaning of the words used in the statute, reflected in the refusal of Congress to adopt a narrower provision, was the meaning promptly attributed to it in the proceedings that were taken to enforce the law. And this appears to have been acquiesced in by the defendants in many prosecutions in which the defendants pleaded guilty. We have been referred to the records of the Department of Agriculture showing nearly thirty cases in which either goods had been seized and no defense made, or pleas of guilty had been entered. Among these are found such cases as the following:

> "No. 29. Hancock's Liquid Sulphur, falsely represented, among other things, to be 'Nature's Greatest Germicide. . . . The Great Cure for . . . Diphtheria.' Investigation begun Nov. 22, 1907. Plea of guilty."
>
> "No. 180. Gowan's Pneumonia Cure, falsely represented, among other things, that it 'Supplies an easily absorbed food for the lungs that quickly effects a permanent cure.' Investigation begun Nov. 22, 1907. Criminal information. Plea of guilty."
>
> "No. 181. 'Eyelin,' falsely represented, among other things, that it 'Repairs and Rejuvenates the Eye and Sight.' Investigation begun Feb. 13, 1908. Plea of guilty."
>
> "No. 261. 'Sure Thing Tonic,' falsely represented, among other things, to be 'Sure Thing Tonic. . . . Restores Nerve Energy, Renews Vital Force.' Investigation begun June 3, 1909. Pleaded guilty."
>
> "No. 424. 'Tuckahoe Lithia Water,' falsely represented, among other things, to be 'a sure solvent for calculi, either of the kidneys or liver, especially indicated in all diseases due to uric diathesis, such as gout, rheumatism, gravel stone, incipient diabetes, Bright's Disease, inflamed bladder, eczema, stomach, nervous and malarial disorders.' Investigation begun July 9, 1908. Plea of guilty."
>
> "No. 427. 'Cancerine,' falsely represented, among other things, to be 'A remarkably curative extract which if faithfully adhered to will entirely eradicate cancerous poison from the system. . . . A specific cure for cancer in all its forms.' Investigation begun about April 12, 1909. Criminal information. Plea of guilty."

I find nothing in the language of the statute which requires the conclusion that these persons who have confessed their guilt in making false and misleading statements on their labels should be privileged to conduct their interstate traffic in their so-called medicines, admittedly worthless, because Congress did not intend to reach them.

Nor does it seem to me that any serious question arises in this case as to the power of Congress. I take it to be conceded that misbranding may cover statements as to strength, quality and purity. But so long as the statement is not as to matter of opinion, but consists of a false representation of fact—in labeling the article as a cure when it is nothing of the sort from any point of view, but wholly worthless—there would appear to be no basis for a constitutional distinction. It is none the less descriptive—and falsely descriptive—of the article. Why should not worthless stuff, purveyed under false labels as cures, be made contraband of interstate commerce,—as well as lottery tickets? *Champion* v. *Ames*, 188 U. S. 331.

I entirely agree that in any case brought under the act for misbranding,—by a false or misleading statement as to curative properties of an article,—it would be the duty of the court to direct an acquittal when it appeared that the statement concerned a matter of opinion. Conviction would stand only where it had been shown that, apart from any question of opinion, the so-called remedy was absolutely worthless and hence the label demonstrably false; but in such case it seems to me to be fully authorized by the statute.

Accordingly, I reach the conclusion that the court below erred in the construction that it gave the statute, and hence in quashing the indictment, and that the judgment should be reversed.

I am authorized to say that Mr. Justice HARLAN and Mr. Justice DAY concur in this dissent.

Correspondence

Knots

To the Editor:—In THE JOURNAL, April 8, is an article entitled, "An Efficient and Time-Saving Method of Tying the Square Knot." In the *South Carolina Medical Journal*, October, 1909, appeared an article in which I described a method of tying knots identical with the one described by Drs. Castle and Ryfkogel. The maneuvers are reversed, however, that is to say, the first turn of their knot is brought down by my second maneuver, etc. Their description also refers to carrying out these maneuvers with both hands simultaneously in order to tie the friction knot. Strange to say, I also anticipated them in describing this one.

B. B. STEEDLY, Spartanburg, S. C.

To the Editor:—Being interested in knots, I attempted to tie this one according to the directions and discovered an error. If the first half of the knot is tied as directed and as shown in Figures 1, 2, 3, 4, I do not get the result as shown in Figure 5. Instead, hands A and B must be crossed to make this half of the knot lie down flat so that it will hold while the second half is tied. This is an awkward position for pulling up the first half which must be snug. This can be obviated by starting with ligature C in hand B and ligature D in hand A. This change will cause the first half of the knot to lie down flat while the second half when tied as given in the directions will come into place properly when the hands are crossed. This is not such an inconvenience in the case of the second half as it does not need to be pulled so snugly.

W. H. BAILEY, Kansas City, Mo.

To the Editor:—In March, 1909, I presented in *Surgery, Gynecology and Obstetrics* an original method of tying surgical knots rapidly and accurately. I have used the method continuously since 1901. The "one-finger" principle described by Drs. Castle and Ryfkogel is identical with mine. The method of application differs merely in the fact that they make first the knot I described as the second, while their second half is my first knot. (Practically, it depends entirely on the manner the hand happens to catch the ligature, whether the one knot is made first or last.) For these reasons I respectfully claim priority in devising and publishing this rapid-tying method. I am very much in accord with Drs. Castle and Ryfkogel in their arguments. This method of making knots will do all they assert and more.

Slight errors are unquestionably due to the artist and not to the surgeon. The context makes this clear. For instance, Figure 4 does not represent any part of a knot. In Figure 5 the hands are shown as having interchanged ends. If this were not done, the hands must be held crossed to show this step in making the knot.

E. P. QUAIN, Bismarck, N. D.

[The above extracts from letters were referred to Drs. Castle and Ryfkogel. The former replies.]

To the Editor:—The principles of producing the square knot which Drs. Quain and Steedly published are identical with those we recently gave. Our application of these, which by the way is merely composed of the movements which have long been employed to form the well known "crochet knot," is less cumbersome than Dr. Quain's. Further, we have given the information necessary to obtain a knot which has two turns in each half, which some surgeons deem very important.

The article that appeared in THE JOURNAL, April 8, 1911, was written over three years ago, since which time it has been lying on the shelf. It was devised, written, and published without the slightest knowledge of any other person's work. I compliment these other authors on their ingenuity and ask your pardon if this occurrence has caused you any embarrassment.

As to Dr. Bailey's criticism: The principle of tying the knot is vividly shown. It would be confusing to mention the end of the ligature that should be held in the grasp of either hand. That is too obvious. If the person tying is the surgeon and if he retains his needleholder in his right hand, thereby using his left hand to tie the free end, one can readily understand that the conditions will be different from those wherein the assistant ties the free end of a continuous suture.

If any one desires to learn to tie this knot by these movements he will have no trouble in learning the method from the article as it stands. He will soon learn to adjust his ligatures in accordance with the conditions governing the situation, i. e. if he is tying with his right or left hand or with both hands, whether he is tying the free end of a continuous suture from the assistant's side of the table or from the surgeon's, or if he is tying ligatures.

H. EDWARD CASTLE, San Francisco.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

TREATMENT OF COAL-OIL POISONING

To the Editor:—Please give the treatment of poisoning from coal-oil. I do not remember having noticed a description of this particular form of poisoning in any of the text-books.

F. S. SPEARMAN, M.D., Whiting, Iowa.

ANSWER.—The treatment of coal-oil poisoning consists in washing out the stomach or administering emetics and using purgatives. In cases of collapse, warm baths with cold effusions are recommended; the usual respiratory and cardiac stimulants are also indicated.

DIGESTIBILITY OF SOUR AND SWEET MILK

To the Editor:—Kindly give me information concerning the relative digestibility of sour and of sweet milk, both for adults and for infants.

C. B. PURVIS, M.D., Brookline, Mass.

ANSWER.—Sour milk may be consumed in two different forms. The one is the naturally soured milk, the other buttermilk. The difference between the two is, first, that sour milk contains the full amount of butter-fat, and, second, that the coagulated casein is not churned in sour milk. The churning of the casein undoubtedly adds to the digestibility, since the more solid curd of sour milk has to be broken up in the stomach. Both sour milk and buttermilk may be considered to be partially predigested as compared to sweet milk and both are therefore more easily digestible, buttermilk to a higher degree than sour milk.

The acidity in milk is produced by the action of bacteria, the acid being chiefly lactic acid. The milk-sugar is decomposed by the activity of these bacteria. Often sugars give rise to fermentations in the digestive tract of man, and in such cases buttermilk or sour milk is preferable to sweet milk because of the reduction of the amount of milk-sugar contained in sweet milk.

In the digestive tract of infants the conditions are emphasized. Infants are more subject to sugar fermentations than are adults and for this reason and, also, because of the somewhat predigested casein, buttermilk has frequently given favorable results. The fat in milk is probably responsible for more digestive troubles in infants than any other constituent in milk. Buttermilk, whether from the churn or made from separator milk by means of "starters," usually contains less than 1 per cent. fat, often as low as 0.1 per cent. Infants with white stools are therefore benefited by the reduction in fat content in buttermilk as compared with sweet milk.

The same principles apply if fermented milks are used, such as kumiss, kefir, Bulgarian milk, etc. Bulgarian milk has an additional advantage over the other fermented milk, inasmuch as the curd formed by the Bulgarian bacillus is smooth and needs hardly any churning.

The claim that the presence of lactic acid in buttermilk, sour milk, and fermented milks is of advantage has not been sufficiently substantiated.

THERAPEUTIC EFFICIENCY OF VARIOUS KINDS OF YEAST

To the Editor:—Please discuss the therapeutic efficiency of the various forms of yeast—brewers', Fleischmann's compressed and "Yeast Foam" dry. Can one be substituted for another?

W. A. Womer, New Castle, Pa.

Answer.—The different forms of yeast are prepared from the upper or top yeast of the brewer and their activity will vary somewhat, according as the yeast is in active growth or in the resting stage. Aside from this there appears to be no distinction between the varieties mentioned.

The Public Service

Medical Department, U. S. Army

Changes for the week ending June 10, 1911.

Siler, Joseph F., captain, and Davis, William R., captain, ordered to remain on duty at the U. S. military academy, West Point, N. Y., until June 14, 1911.

Murray, Wilson, M.R.C., ordered to accompany field artillery from Fort Snelling, Minn., to Sparta, Wis., and then return to station Fort William H. Harrison, Mont.

Blodgett, Harry H., M.R.C., recently appointed, ordered to active duty, and assigned to duty at Fort Riley, Kan.

Fisher, Henry C., major, June 5, left Columbus Barracks, Ohio, on ten days' leave of absence.

Reno, William W., major, ordered to inspect hospital corps, New Hampshire militia, at encampment near Wilton, N. H., June 12 to 17, 1911.

Long, Charles J., D.S., ordered to several posts in the Department of the East for temporary duty.

Jackson, Thomas W., M.R.C., granted one month and ten days' leave of absence, about June 10, 1911.

Morse, Charles F., captain, granted leave of absence for two months and fifteen days, about Aug. 15, 1911.

Brechemin, Louis, colonel, ordered to proceed to St. Louis, Mo., and relieve Lieutenant-Colonel Snyder as medical supply officer in that city.

Snyder, Henry D., lieut.-col., on being relieved from duty in charge of the medical supply department, St. Louis, Mo., by Col. Louis Brechemin, M.C., will proceed to New York City and assume charge of the medical supply department in that city, as heretofore ordered.

Appel, Aaron H., colonel, relieved from active service after more than thirty-one years' service.

Reynolds, Royal, lieut., left Cienegas, N. Mex., en route to Denver, Colo., for duty.

Reynolds, Charles R., major, is assigned to duty as inspector, sanitary troops organized militia, State of New York, encampment, Peekskill, N. Y.

Love, Joseph W., M.R.C., reported for temporary duty at Fort Andrews, Mass.

Woodbury, Frank T., major, relieved from duty at Fort Assinniboine, Mont., and from temporary duty at Fort D. A. Russell, Wyo., and ordered to Fort Screven, Ga.

O'Connor, R. P., major, relieved from duty at Fort Screven, Ga., to take effect on return from Galveston, Texas, and ordered to Fort Huachuca, Ariz., for duty.

Medical Corps, U. S. Navy

Changes during the week ended June 10, 1911.

Holcomb, R. C., surgeon, detached from the *Delaware* and ordered to the *North Dakota*.

Pleadwell, F. L., surgeon, detached from the *North Dakota* and ordered to the *Delaware*.

Backus, J. W., P. A. surgeon, detached from the *Pennsylvania* and ordered to the *Iris*.

Davidson, A. B., asst.-surg., detached from the *Iris* and ordered to the Pacific torpedo fleet.

Downey, J. O., P. A. surgeon, detached from the *Prairie* and ordered to the *Chester*.

Bogan, F. M., surgeon, detached from the *Wisconsin* and ordered to duty at the naval hospital, Portsmouth, N. H.

Jenness, B. F., P. A. surgeon, detached from the naval hospital, Portsmouth, N. H., and granted sick leave for three months.

Derr, E. Z., medical director, on being placed on the retired list, June 10, detached from the Navy recruiting station, Providence, R. I., and ordered home.

Ohnesorg, K., surgeon, detached from the Navy yard, New York City, and ordered to duty at the naval hospital, Philadelphia.

Dorr, E. Z., medical director, transferred to the retired list from June 10, 1911.

U. S. Public Health and Marine-Hospital Service

Changes for the seven days ended June 7, 1911.

Pettus, W. J., asst. surg.-gen., granted nine days' leave of absence from June 2, 1911.

Kerr, J. W., asst. surg.-gen., granted twenty-two days' leave of absence from July 10, 1911.

Long, J. D., asst. surg.-gen., granted one month's leave of absence from July 1, 1911.

White, J. H., surgeon, granted twenty-one days' leave of absence from June 1, 1911, without pay.

Carrington, P. M., surgeon, granted fourteen days' leave of absence from June 23, 1911.

William, L. L., surgeon, detailed to attend the thirty-eighth annual meeting of the National Conference of Charities and Corrections, to be held in Boston, June 7-14, 1911.

Wertenbaker, C. P., surgeon, detailed to attend the annual meeting of the Association of Surgeons of the Norfolk & Western Railway, to be held in Richmond, Va., June 15-16, 1911.

Young, G. B., surgeon, granted nineteen days' leave of absence from June 1, 1911.

Nydegger, J. A., surgeon, granted one month's leave of absence from May 24, 1911, on account of sickness.

Blue, Rupert, surgeon, detailed to represent the service in the Section on Preventive Medicine and Public Health of the American Medical Association, to be held in Los Angeles, Cal., June 26-30, 1911.

Rucker, W. C., P. A. surgeon, directed to proceed to Victor, Mont., and report to Passed Assistant Surgeon T. B. McClintic for duty in the investigation of Rocky Mountain spotted fever.

Smith, F. C., P. A. surgeon, detailed to represent the service at the annual meeting of the National Association for the Study and Prevention of Tuberculosis, to be held at Denver, Colo., June 20-21, 1911.

Hunt, Reid, professor of pharmacology, detailed to represent the service at the sixty-second annual meeting of the American Medical Association, to be held at Los Angeles, Cal., June 26-30, 1911.

Rodman, J. C., A. A. surgeon, granted twelve days' leave of absence from June 13, 1911.

Slamberg, N. L. A. K., A. A. surgeon, granted twenty-five days' leave of absence from June 2, 1911.

Brown, F. L., pharmacist, relieved from temporary charge of South Atlantic quarantine station and ordered to proceed to Wilmington, N. C., and report to the medical officer in command for duty and assignment to quarters; granted fifteen days' leave of absence from June 1, 1911.

Medical Economics

This Department Embodies the Subjects of Post-graduate Work, Contract Practice, Legislation, Medical Defense, and Other Medicolegal and Economic Questions of Interest to Physicians

EDITORIAL COMMENTS ON PUBLIC HEALTH PROBLEMS

This department has occasionally reprinted extracts from newspaper editorials, with a view to showing the position of the representative newspapers of the country on public health matters. The amount of space given to such questions by the better class of newspapers is steadily increasing. This is one of the many evidences of constantly growing public interest in better health conditions. Here are a few extracts from a large number of newspaper clippings received in the past few weeks:

The Peoria (Ill.) *Transcript*, commenting on the decision of the United States Supreme Court in the case of the government against O. A. Johnson of Kansas City, says:

> The "patent-medicine" business has grown to stupendous proportions in this country. Viewed from the standpoint of "vested interests" it is one of the largest in investment and profits. While there are doubtless many legitimate preparations sold, it is true that the great bulk of consumption, rheumatism and cancer "cures" are rank frauds. If the medicine-makers cannot tell the truth about their product with-

> out breaking their business up, it is not legitimate business. The first duty of the government is to protect its citizens from fraud and medical frauds are the least excusable of any.

The Akron (O.) *Beacon-Journal*, after quoting at length from *Collier's* editorial on the National League of Medical Freedom, expresses its opinion as follows:

> Health regulation should be no more a matter of individual choice than should burning one's own home in a crowded city. It is doubtful if more hypocrisy could be created into two words than in the single phrase of "medical freedom" which has been exploited by a league of late, whose workings are hidden to the average man except that it is evidently well provided with money. . . . The era of health regulation, pure food, pure drugs, etc., has fallen heavily on those who formerly made their living from the gullible public by means of pretensions of false science and by dealing in adulterations. Little wonder they have subscribed liberally to frustrate one of the greatest movements of the day.

The *Daily Chronicle* of Orange, N. J., discussing the compulsory vaccination law for school children, says:

> Whatever the plea made in support of the opposition to vaccination, it must be admitted that the vast preponderance of argument and evidence is in favor of the practice. It can hardly be credited to a natural coincidence that smallpox is practically eliminated where vaccination is systematically and generally enforced and the occasional cases of blood-poisoning, tetanus or scrofula that might be authentically traced to the inoculation are too remote a danger to justify the abolition of the precaution that is entirely successful in such a vast majority of cases. Vaccination is required as a preventive and not as a cure. . . . A rule requiring it must be enforced without exceptions if it is to be effective and a single exception in its application would open the way to others of equal merit and it might as well be rescinded entirely.

Commenting on the work of physicians in reducing disease, the Leavenworth (Kan.) *Times* says:

> Doctors are the queerest people in the world. Men in other business use means to increase their business. The doctors use means to make theirs less. It is to their interest that there should be sickness in the community, yet they are constantly advising their patients how to avoid sickness and they are constantly urging the communities in which they live to take precautions to prevent epidemics.
>
> These thoughts were suggested by the action of the Leavenworth County Medical Association in determining to bring the state tuberculosis exhibit to the city again.
>
> Last year the association brought the exhibit here, hired a room and paid nearly all the expense themselves, and all in order to teach the people the danger of contagion from the dread disease and how to avoid it. Hundreds of people visited the exhibit while it was here and the doctors of the city reported afterward that there was a distinct effort being made by many people to take proper precautions to avoid the disease.
>
> It was a great thing to do for the city and the city should have paid the expense. The commissioners felt, however, that they had no right to use the public money in that way, but each one of them went down into his pocket and gave a contribution to assist in paying for the exhibit.
>
> This year the doctors will ask the commissioners to pay at least a part of the expense out of the city treasury and we see no reason why it should not all be paid that way. The exhibit is for the benefit of all—unless the doctors may be excepted. We do not see why they should bear the burden of lessening their own business.

The Des Moines (Ia.) *Register* commenting on the resignation of two members of the state board of health who, according to newspaper reports, were discouraged over the efforts of the board to carry on effective work with the meager appropriation allowed by the state, says:

> It is doubtful if the doctors who are hastening to resign from the state board of health because the legislative appropriations for its work were inadequate are acting altogether temperately. It is true they have occasion to feel dissatisfied. The legislature has treated the matter of conserving the public health as though it were of no consequence. The medical men of the state are, no doubt, getting tired of "nagging the public into taking care of itself." . . .
>
> But, granting the provocation and all else, the fact still remains that the public health must be cared for as best it may. The fact remains that the State Board of Health must continue to do its work in spite of every obstacle. The fact remains that doctors must continue to do the very best they can to interest the public in conserving its health. Why shouldn't the members of the board of health make the best of the situation and give the state the best service they can under the circumstances? Why is not the need of large, capable men on the state board even greater now than it might be otherwise?
>
> Public service always calls for some sacrifice. Even under the most favorable conditions there would be disagreeable things about membership on the State Board of Health. There are merely a few more to contend with now, that is all. The interests of the state at large ought to be considered worth working for in spite of comparatively small annoyances. It is not always the best time to quit when impatient or when there is work ahead.

And yet if the same physicians, who the *Register* says "must continue to do the very best they can" to protect the public health, should ask the legislature for more stringent laws to exclude the ignorant and vicious from trifling with the lives of citizens, or even for the enforcement of existing laws, they would be denounced as endeavoring to establish a "doctors' trust."

Medical Education and State Boards of Registration

COMING EXAMINATIONS

ARIZONA: Phoenix, July 5-6. Sec., Dr. Ancil Martin.

COLORADO: Denver, July 5. Sec., Dr. S. D. Van Meter, 1723 Tremont Street.

CONNECTICUT: Regular, City Hall, New Haven, July 11-12. Sec., Dr. Charles A. Tuttle, 196 York St.; Homeopathic, Grace Hospital, New Haven, July 11. Sec., Dr. Edwin C. M. Hall, 82 Grand Ave.; Eclectic, Hotel Garde, New Haven, July 11, Sec., Dr. T. S. Hodge, 19 Main St., Torrington.

DELAWARE: State Society and Homeopathic, Dover and Wilmington, June 20. Secretary of the Medical Council, Dr. H. W. Briggs, Wilmington.

INDIANA: Room 120 State House, Indianapolis, July 11-13. Sec., Dr. W. T. Gott, Crawfordsville.

MAINE: State House, Augusta, July 6-7. Sec., Dr. Frank W. Searle, 806 Congress St., Portland.

MARYLAND: 1211 Cathedral St., Baltimore, June 20. Sec., Dr. J. McPherson Scott, Hagerstown.

MINNESOTA: State University, Minneapolis, June 20. Sec., Dr. W. S. Fullerton, 214 American National Bank Bldg., St. Paul.

NEW HAMPSHIRE: State House, Concord, July 6-7. Regent, Mr. Henry C. Morrison.

NEW JERSEY: Capitol Bldg., Trenton, June 20-21. Sec., Dr. H. G. Norton.

NEW MEXICO: The Capitol, Santa Fe, July 10-11. Sec., Dr. J. A. Massie.

NEW YORK: June 27-30. Mr. Harlan H. Horner, Chief of Examinations Division, Department of Education, Albany.

NORTH DAKOTA: Grand Forks, July 5. Sec., Dr. H. M. Wheeler.

OKLAHOMA: Ione Hotel, Guthrie, July 11. Sec., Dr. John W. Duke.

OREGON: Portland, July 4. Sec., Dr. E. B. McDaniel, 704 Electric Building.

PENNSYLVANIA: Regular, Homeopathic and Eclectic, Philadelphia and Pittsburg, June 27-30. Secretary of the Medical Council, Mr. Nathan C. Schaeffer, Harrisburg.

RHODE ISLAND: State House, Providence, July 6-7. Sec., Dr. Gardner T. Swarts.

TEXAS: Austin, June 27-29. Sec., Dr. J. D. Mitchell, Fort Worth.

UTAH: State House, Salt Lake City, July 5-6. Sec., Dr. G. F. Harding, 310 Templeton Building.

VERMONT: Burlington, July 11-13. Sec., Dr. W. Scott Nay, Underhill.

VIRGINIA: Richmond, June 20-23. Sec., Dr. R. S. Martin, Stuart.

WASHINGTON: Tacoma, July 4. Sec., Dr. F. P. Witter, Traders Block, Spokane.

WEST VIRGINIA: Capitol Building, Charleston, July 10-12. Sec., Dr. H. A. Barbee, Point Pleasant.

New Requirements in Arkansas

At the recent meeting of the State Medical Board of the Arkansas Medical Society, a new schedule of requirements for medical colleges was adopted. Beginning with the session of 1911-12, every matriculant in the medical colleges of Arkansas must obtain a matriculation certificate from the board. These certificates will be issued on either (a) acceptable credentials or (b) successful passing of an examination before the State Superintendent of Public Instruction.

The minimum preliminary education is given as that required for entrance to the University of Arkansas. For the next college session this minimum must represent 13 units of secondary school work, 7 of which must be in prescribed subjects as follows: English, 3 units; algebra, 2 units; plain geometry, 1 unit, and United States history, 1 unit. The remaining 6 units may be taken in elective subjects.

To be in good standing, each medical college must require for graduation not less than four courses of lectures of at least thirty weeks each, and must require regular attendance on these courses, no allowance to be made for absence except when due to sickness and such absences must not exceed 20 per cent. of the course. Attendance of at least two years in well-equipped laboratories and two years of clinical and hospital instruction is also required. No medical school will be considered in good standing if it issues a catalogue or announcement containing misrepresentations regarding its teaching facilities, courses of instruction or number of students matriculated.

Minnesota April Report

Dr. W. S. Fullerton, secretary of the Minnesota State Board of Medical Examiners, reports the written examination held at Minneapolis, April 4-7, 1911. The number of subjects examined in was 12; total number of questions asked, 120; percentage required to pass, 75. The total number of candidates examined was 13, of whom 10 passed and 2 failed. One candidate did not complete the examination. Fourteen candidates were licensed through reciprocity. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
Rush Medical College	(1909) 82.1; (1910)	81.3
Hamline University	(1908)	75.3, 84.6
Univ. of Minn., Coll. of Med. and Surg	(1910)	80.7, 86.5, 92
McGill University, Quebec	(1909)	81.7, 87.3
Laval University, Montreal	(1899)	77

FAILED

College	Year Grad.	Per Cent.
Louisville and Hospital Medical College	(1908)	58.5
Hamline University	(1907)	72

LICENSED THROUGH RECIPROCITY

College	Year Grad.	Reciprocity with
University of Colorado	(1910)	Colorado
Northwestern University Medical School,	(1908)	Wisconsin; (2, 1910) Illinois.
College of Physicians and Surgeons, Chicago	(1909)	Illinois
Hahnemann Med. Coll. and Hospital, Chicago	(1891)	Wisconsin
Johns Hopkins University	(1904)	Illinois
St. Louis University	(1910)	Illinois
Kansas City Medical College	(1902)	Nebraska
University Medical College, Kansas City	(1908)	Kansas
Western Pennsylvania Medical College	(1900)	N. Carolina
Wisconsin College of Physicians and Surgeons	(1908)	Wisconsin
Marquette University	(2, 1910)	Wisconsin

Nevada May Report

Dr. S. L. Lee, secretary of the Nevada State Board of Medical Examiners, reports the written examination held at Carson City, May 1-3, 1911. The number of subjects examined in was 13; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 5, all of whom passed, including 1 osteopath. Six candidates were licensed through reciprocity. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
National Medical University, Chicago	(1898)	81.9
Univ. of Michigan, College of Med. and Surg	(1885)	91.9
University of Michigan, Homeopathic College	(1897)	86.2
Columbia Univ., Coll. of Phys. and Surgs	(1892)	89.9

LICENSED THROUGH RECIPROCITY

College	Year Grad.	Reciprocity with
Rush Medical College	(1901)	Illinois
Indiana University School of Medicine	(1909)	Indiana
[illegible] Sims Beaumont Medical College	(1902)	Nebraska
[illegible] a	(1906)	Nebraska
[illegible] ge	(1902)	W. Virginia
[illegible] Medical College	(1908)	Illinois

Book Notices

A Text-Book of Gynecologic Surgery. By Comyns Berkeley, M.A., M.D., B.C.Cantab., Gynecologist and Obstetrician to the Middlesex Hospital, and Victor Bonney, M.S., M.D., B.Sc.*Lond.*, Assistant Gynecologist and Assistant Obstetrician to the Middlesex Hospital. Cloth. Price, $5 net. Pp. 720, with 392 illustrations. New York: Funk & Wagnalls Co., 1911.

The purpose of this work is to set forth the detail and technic of the various gynecologic operations. No attempt has been made to discuss the etiology, pathology, symptoms and diagnosis in each condition, but rather the indications and contra-indications for operation have been considered, together with comparisons of the various methods at the operator's disposal in a given case. The descriptions of the various operations are unusually clear and complete, and in many instances each step of the procedure is illustrated. The book is very fully supplied with cuts. After a discussion of general considerations, the writers take up the consideration of vaginal operations, then the gynecologic operations performed by the abdominal route, together with a description of other abdominal operations which, while not strictly of a gynecologic nature, yet frequently are imposed on the operator; for instance, intestinal resection and anastomoses, repair of wounds of bladder and ureter, etc. The subjects are discussed in a systematic, lucid and forceful manner, showing a long familiarity with the work and a keen appreciation of the needs of the occasional operator and the beginner. The chapters devoted to the consideration of the operative complications and after-treatment are to be commended as the usual text-book either passes over them lightly or omits them entirely.

Essentials of Biology Presented in Problems. By George William Hunter, A.M., Head of the Department of Biology, De Witt Clinton High School, New York. Cloth. Price, $1.25. Pp. 448, with illustrations. Chicago: American Book Co., 1911.

A Laboratory Manual for the Solution of Problems in Biology. By Richard W. Sharpe, Instructor in Biology in the De Witt Clinton High School, New York. Cloth. Price, 75 cents. Pp. 352, with 86 illustrations. Chicago: American Book Co., 1911.

Professor Hunter has prepared a text-book, which is issued in company with Mr. Sharp's laboratory manual, the two forming a logical inductive method for the study of biology. The authors have presented their subject by means of a series of "problems" in biology rather than by the more conventional didactic method, seeking to arouse the interest and reasoning power of the pupil by presenting a series of physiologic problems, accompanied by directions for laboratory demonstrations and practical questions for the student to investigate and answer. Copious references to other authors accompany each chapter, many references being to articles in current magazines, government reports, etc. These books form admirable guides for the study of biology and give ample opportunity for the development of topical methods, it being the aim of the authors to show that methods of study which induce thinking are of far more importance than mere memorizing.

Inebriety. A Clinical Treatise on the Etiology, Symptomatology, Neurosis, Psychosis and Treatment and the Medicolegal Relations. By T. D. Crothers, M.D., Superintendent Walnut Lodge *Hospital*, Hartford, Conn. Cloth. Price, $3. Pp. 365. Cincinnati: Harvey Publishing Co., 1911.

This is probably the most complete treatise on inebriety by an American author. The whole subject is considered scientifically, not sensationally, as so often in treatises on inebriety. The author's recommendations of treatment are judicious and will be helpful to all who need aid in the management of this disease. No subject is more important but, unfortunately, like other common diseases, it interests many practitioners less than the uncommon. What can be done for the inebriate by proper medical advice and guidance is not as universally appreciated as it should be. Moreover, institutional treatment is not a necessity in every case and all practitioners should equip themselves properly to guide patients to recovery or past the hazards which beset the path of so many. A careful study of this book will reward those who do not feel fully equipped for the care of the inebriate.

Bismuth Paste in Chronic Suppurations. Its Diagnostic Importance and Therapeutic Value. By Emil G. Beck, M.D., Surgeon to the North Chicago Hospital, Chicago. With an Introduction by Carl Beck, M.D. And a Chapter on the Application of Bismuth Paste in the Treatment of Chronic Suppuration of the Nasal Accessory Sinuses and the Ear, by Joseph C. Beck, M.D. Cloth. Price, $2.50. Pp. 237, with 90 illustrations. St. Louis: C. V. Mosby Co., 1910.

The use of bismuth paste in the treatment of chronic suppurations and the use of bismuth in various forms of suspension for diagnostic purposes have become recognized procedures of value. With these, as with most operative procedures, however simple they may appear, it is necessary in order to attain the highest degree of success to carefully follow the correct technic. Many of the failures in the use of bismuth paste have been due either to faulty technic or to use in unsuitable cases. In this volume is found a careful description of the technic by the originator of the method as well as a review of the cases in which it has proved of value. Attention is also directed to the fact that severe and even fatal poisoning may follow the injudicious use of bismuth. This method, therefore, should be used only after one is thoroughly familiar with its possibilities and its dangers; hence a careful perusal of this little volume is almost essential to those who expect to use the method.

Truths: Talks with a Boy Concerning Himself. By E. B. Lowry, M.D., Author of "Confidences." Cloth. Price, 50 cents. Pp. 95. Chicago: Forbes & Co., 1911.

This little book, dedicated "To the Man of To-Morrow," is an effort to impart instruction to boys on sexual hygiene. It is interestingly written in the form of talks to a boy by his uncle. Beginning with a description of plant life and the method of plant reproduction, the reader is gradually led through the lower forms of animal life, with which he is naturally familiar, to the chapter on "The Mechanism of Our Bodies," the needed information being imparted in a natural and unsensational manner. Chapters containing needed warnings to boys on the dangers of listening to the advice of advertising fakers and a chapter on "Sowing Wild Oats," containing advice to the boy about to leave home, are particularly good. The tone of the book is excellent and it can be safely recommended to parents and others who wish to instruct children in this important subject.

The Serpent's Trail, or, Memoirs of Harold Bagote, Physician. A Tale of the South and of Cuba. By F. B. Cullens. Cloth. Price, $1.25. Pp. 168. New York: Broadway Publishing Co.

This is a melodramatic story of the adventures of a physician with a band of smugglers the leader of whom is the villain of the book. Under strange circumstances the hero was able to render great service to a beautiful woman. He was also enabled to foil the villain's wicked designs on another young and beautiful girl. The villain's machinations, however, resulted in the death of several characters including himself. The physician was later rewarded by the hand of the beautiful Spanish widow of the smuggling villain. Being written by a physician, concerning a physician, the book may be of interest to physicians who like this kind of literature.

State Board Questions and Answers. By R. Max Goepp, M.D., Professor of Clinical Medicine at the Philadelphia Polyclinic. Second Edition. Cloth. Price, $4 net. Pp. 715. Philadelphia: W. B Saunders Co., 1911.

According to the preface of the first edition this book is based on the questions asked by state medical licensing boards during several years. Duplicate questions have been eliminated and condensed answers follow. An exhaustive index makes it possible to find the reference to any subject readily. The evident purpose of the book is to provide a convenient compend for those who wish to prepare for state board examinations.

Plaster of Paris and How to Use It. By Martin W. Ware, M.D., New York, Adjunct Attending Surgeon, Mount Sinai Hospital. Second Edition. Cloth. Price, $1.25. Pp. 101, with 90 illustrations. New York: Surgery Publishing Co., 92 William Street, 1911.

Following out the suggestions contained in the criticisms of the first edition the author has revised and rearranged this book. New matter and new illustrations have been added and marginal notes in red have been employed.

Medicolegal

Hospital for Treatment of Bone Tuberculosis Not a Nuisance

The Court of Chancery of New Jersey, in Board of Health and certain residents and property holders of Ventnor City vs. North American Home (78 Atl. R. 677), denied a preliminary injunction to prevent the defendant from conducting a sanitarium for the treatment of bone tuberculosis.

The court says that it was disclosed by affidavits filed in behalf of the defendant that the sanitarium was for the free treatment of poor children afflicted with said disease, and was not maintained for profit. Notwithstanding, however, the great public good which would necessarily result from the work of an institution of that nature, it was manifest that, if the health of the residents of Ventnor City was jeopardized by its maintenance, a court of equity might grant such relief as would afford adequate protection to the residents of that city from the threatened danger; but, if no real danger of that nature existed, the mere fact that uninformed people who were unacquainted with the true conditions might or probably would assume such a danger to exist could not be made the basis of equitable relief.

The answer which was filed in behalf of the defendant was accompanied by affidavits of a great number of physicians and surgeons of eminence in their profession and who had given special study to the various forms of tuberculosis. They testified that while pulmonary tuberculosis is undoubtedly contagious, bone tuberculosis is neither contagious nor infectious, and cannot be transferred from one to another; and that cases of bone tuberculosis are freely admitted to all the hospitals and treated in the same wards as other surgical cases. If that was true, it was manifest that no danger to the health of the inhabitants of Ventnor City was threatened by the maintenance of the sanitarium in question and the grievance asserted by the complainants was based on an assumed danger which did not in fact exist.

It was urged that the New Jersey legislature had declared bone tuberculosis to be a communicable disease, and an act of 1910 concerning tuberculosis contains this sentence: "Tuberculosis is hereby declared to be an infectious and communicable disease, dangerous to the public health." But an examination of the several provisions of that act, especially when considered in connection with the testimony touching the difference between pulmonary and bone tuberculosis, renders it at least doubtful whether the portion of the act above quoted was intended to include bone tuberculosis. If any truth was to be found in the affidavits of the physicians who had testified touching the nature of bone tuberculosis, it was entirely manifest that the legislature had not intended the section making it a misdemeanor for "any person having tuberculosis" to dispose of his sputum in a manner contrary to the directions of the act, to control the disposition of the sputum of persons afflicted only by bone tuberculosis. Whether any of the provisions of that act were intended to include bone tuberculosis it was not necessary to consider here; but the court is convinced that the legislation referred to could not properly be deemed operative to render the institution conducted by the defendant a nuisance *per se*, or in and of itself.

Wide Range of Evidence Admissible in Support of Defense of Insanity

The Supreme Court of Washington in granting a new trial in the case of State vs. Flanney (112 Pac. R. 630), where the defendant, a half-breed Indian, was convicted of the murder of his wife, says that it deems the question presented as to the admissibility of evidence in such a case to be one of more than usual interest and importance. The question was raised by a rejection by the trial court of an offer by the defendant to prove that his wife had taken up with what is known among the Indians as the Shakers; that the man of whom the defendant was jealous, and whom he charged with having weaned his wife away, was a Shaker; that the Shaker society is an Indian religious organization which teaches and practices promiscuous, illicit intercourse among its members, and that it is the duty of a member having a spouse who is not one of that faith to secure a divorce; that the defendant knew of his wife's faith, and, suspecting her of lewd conduct, was so greatly distressed in mind that for the time his *reason* was dethroned. The Supreme Court holds that this evidence was admissible.

The Supreme Court says that it has made an earnest research of the authorities, and finds that it is a first principle of the law that in all cases involving mental responsibility, whether it be in regard to contracts, wills, etc. or crimes, every fact which tends to show that the mental *condition* of the subject was abnormal at the time of the execution of the instrument or commission of the crime is competent. For the mind diseased cannot be measured by the mind of another. Neither the moving cause nor the limit of its aberration is to be calculated by any standard fixed by the law or medical science. Each case fixes its own relation to the law. What may unbalance one mind and lead it to act on its criminal impulses may have no bearing on another. Therefore it is important that all things which may bear on the subject of inquiry should be submitted to the jury, that it may say whether, from all the facts and circumstances leading up to the act complained of, the accused was, in fact, capable of distinguishing right from wrong when he committed the act.

The leading case on this subject is that of People vs. Wood, 126 N. Y. 249, which establishes the principle that "a party is entitled to the benefit of any competent evidence he may offer which bears on a controverted question of fact embraced in the issue."

A delusion of marital infidelity is acknowledged as a type or symptom of homicidal insanity by alienists. Mr. Clevenger, at pages 650, 651, 653, 658 and 1074, cites instances to confirm this theory. So that, whether the accused had a belief grounded *in fact or born of imagination*, the evidence which was rejected was proper as tending to throw light on the defendant's mental attitude toward the victim of his deliberate physical act. Under all authority, it seems clear that, having laid a foundation by showing some evidence of mental aberration, the defendant could show that his wife's conduct had been such as to account for the state of his mind, and that his plea was not feigned. *The testimony* does not prove or disprove the crime, but it is a circumstance to be considered by the jury, as is a blow on the head, or a drug habit, etc. Nor does it introduce a collateral issue to be tried out. The inquiry should not go beyond such limit as will disclose the fact to the jury that there was a cause which might have moved the mind of the accused, and which it may consider as evidence tending to sustain his plea.

Such testimony should go to the jury under careful instructions. Its purpose and the limit of its application should be carefully guarded; so that the jury will not take it, if true, as in itself a justification or as an excuse for the crime, nor to prove justification for anger, hatred, revenge or an uncontrolled passion, or the momentary impulse of a sane mind, but for just what it is intended; that is, whether, considering all the facts and circumstances offered to show an insane act, it tends to strengthen the testimony by showing an adequate cause accounting in some degree for the alleged mental condition of the accused at the time the murder was committed.

It may be assumed that no man can measure the torment which a doubting husband tells o'er. If in the telling his reason so far fails that he cannot distinguish the right or wrong of his act, he is indeed an object of pity and compassion; but, on the other hand, if, with mental power to distinguish right from wrong, he takes the life of his victim, he should be made to feel the heavy and unflinching hand of the law. It is *for the jury* to say whether the defendant is a felon, or the victim of an unfathomed nature. That it may make no mistake, the defendant is entitled to submit such evidence as he may, providing *only* that it is relevant and competent to sustain his plea.

Society Proceedings

COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION, Los Angeles, June 27-29.

American Academy of Medicine, Los Angeles, June 23-26.
American Medico-Psychological Association, Denver, June 19-20.
American Ophthalmological Society, New London, Conn., July 11.
American Otological Society, Atlantic City, June 26-27.
American Proctologic Society, Los Angeles, June 26-27.
American Surgical Association, Denver, June 19-21.
Arizona Medical Association, Los Angeles, June 26.
Conf. of Bds. of Health of N. America, Los Angeles, June 30-July 1.
Maine Medical Association, Augusta, June 28-29.
Nat'l Assn. for Study and Prev. of Tuberculosis, Denver, June 20-21.
North Carolina, Medical Society of State of, Charlotte, June 20.
Oregon State Medical Association, Los Angeles, Cal., July 10.

FLORIDA MEDICAL ASSOCIATION

Thirty-Eighth Annual Meeting, held at Tallahassee, May 10-12, 1911

The President, DR. J. D. LOVE, in the Chair

The officers elected were named in THE JOURNAL, June 3, 1911, page 1660.

House of Delegates

The report of the secretary showed 316 members in twenty-two counties.

Joint Examining Board

DR. J. H. PIERPONT, chairman of the Committee on Public Policy and Legislation, made his report in regard to an effort to have the regular, homeopathic and eclectic examining boards agree to consent to a joint board of examiners; that the homeopathic so far were not favorable to the proposition, and that the eclectic would not consent. Many irregularities in the method of appointment by the last-mentioned body were reported on the floor of the house. One of the prominent eclectics, Dr. S. F. Smith of Lakeland, a member of the association, promised his earnest support in bringing about favorable action on the proposed legislation. It is probable that the 1913 legislature of Florida will be asked to combine the three boards.

The Owen Bill

The Owen Bill, Senate Bill No. 1, providing for a national department of health, was endorsed, by resolutions, and its adoption urged.

The house adopted a resolution asking the legislature to place licensed physicians, who wished to practice pharmacy, on the same basis as graduates of pharmacy; i. e., requiring an examination before the board of pharmacy; except that this should not prevent a practicing physician from dispensing his own drugs.

Organization and Advancement of the Profession

DR. J. N. MCCORMACK, chairman of the Committee on Organization of the American Medical Association, addressed the association as to the value of organization, mutual cooperation and assistance in an effort to elevate the standard of the practice of medicine. On Thursday evening, his excellency, Albert W. Gilchrist, governor of Florida, presiding, Dr. McCormack, before a public audience, consisting of the state officials, members of the legislature, the medical association, and citizens of Tallahassee, delivered an address on the advantage of good health, how it can be obtained and maintained, the needs of the citizenship from a sanitary standpoint, and outlined the methods which should be followed in obtaining a closer cooperation between the profession and the public.

Some Needs of To-Day

DR. J. D. LOVE, Jacksonville: The growth of the Association has been very gratifying and I would urge that careful selection be made in admitting members and that the older members of the profession take a more active interest in the scientific work and exercise their mature thought in the leadership of the profession. The modesty is unfair and injurious that leads an older physician to withhold his valued teachings in the mistaken assumption that only that which is new and as yet unproved appeals to the profession. As for the charlatans and medical imposters who every year invade the state, proper influence should be used to have the legislature define "the practice of medicine." The examining board should have statutory authority, probably with the consent of the governor in eash instance, to revoke for good and sufficient reason, the license of a physician. The practice of applicants, when having failed before the regular examining board, going before other boards of examiners and securing a license to practice medicine should be condemned. Legislation to secure proper compensation for expert medical testimony should be secured.

Surgical After-Treatment of Anterior Poliomyelitis

Dr. R. C. Turck, Jacksonville: Fully 90 per cent. of all cases of poliomyelitis in children are certain to terminate with some permanent paralysis and muscular atrophy. Every case of infantile paralysis is a law unto itself. Practically no two cases are alike. Until there has been perfected a specific as uniform and as undoubted as diphtheria antitoxin, for instance, we must face the consequences of infantile paralysis, and direct efforts first, to the minimization, and second, to the relief of the inevitable end results. Much can be done in the subacute stages by prophylactic treatment. Massage, joint manipulation, passive and active muscle stretching, with corrective and retention apparatus, if indicated, will prevent contracture deformity in practically all cases. The ideal treatment of deformity in poliomyelitis is prophylactic. In neglected cases, of those in which contracture occurs, in spite of preventive measures, deformities, especially of the ankle and knee, may be corrected by several means: tenotomy is most widely employed and most valuable if used with due regard to end results.

DISCUSSION

Dr. J. H. Randolph, Jacksonville: Notwithstanding the very best medical treatment we can give, sooner or later, with rare exceptions, the surgeon's knife must be resorted to for relief. With increased knowledge of benefits derived from early treatment, a diminution of extreme deformities should result. Early recognition of the condition is necessary, and I hope that soon we will have a serum for general use.

Traumatic Tetanus

Dr. E. N. Liell, Jacksonville: A male, aged 10, was injured by a blank pistol cartridge, Dec. 24, 1908. On the ninth day following, symptoms of rigidity of lower jaw muscles developed, with slight convulsive seizures; subsequently the muscles of the neck, chest and back became implicated. On the twelfth day he was admitted to the hospital. A decided convulsion was repeated an hour later. The wound, of charred character, partly healed, was thoroughly excised and a bichlorid dressing was applied. At 4:30 p. m. 5,000 units of antitetanic serum were injected into the muscles over the right shoulder blade; an enema of normal salt solution was given. Next day 5,000 units were injected at 11 a. m. Repeated convulsions lasting from a few seconds to two minutes occurred throughout the night; nourishment was refused, but he took water through a tube; 4:30 p. m., 3,000 units, 1 pint enema salt solution; January 7, 11 a. m., 3,000 units were injected; muscles contracted but not as rigid; four convulsions during past twelve hours. Five p. m., light convulsion; January 8, numerous convulsive seizures during night; refused nourishment, and chloral and sodium bromid, 10 grains each dose, but would take water; 3,000 units injected 11 a. m.; 3,000 units injected 7 p. m. after several convulsions, one lasting eight minutes though not formidable. January 9, noon, 3,000 units; 7 p. m., 3,000 units; muscles of jaw and neck relaxed somewhat, so that teeth could be separated an inch. January 10, 11 a. m., 3,000 units; 8 p. m., 3,000 units. January 11, 3,000 units. January 12, 11 a. m., 3,000 units; 7 p. m., 3,000 units. January 13, 11 a. m. and 8 p. m., 1,500 units. January 14 and 15, 1,500 units each. January 15 and 16, chloral, 20 grains. Patient discharged well, January 24. Temperature ranged from 99 to 101 F.; pulse 84-122; respiration 20-46; 55,000 units antitoxin total given.

DISCUSSION

Dr. J. H. Randolph, Jacksonville: In a case reported to the association in 1908, intraspinal injections of magnesium sulphate were successful in treatment.

Dr. G. L. Winthrop, Mobile: Of eight patients with traumatic tetanus four were not given antitoxin. They died. Four were given antitoxin after symptoms developed and recovered. In one case chloroform, in two cases intraspinal injections of magnesium sulphate, were given to control convulsions. The question of whether antitoxin given after the onset of symptoms has been beneficial or harmful is unsettled, but in all cases where tetanus develops, the antitoxin should be given.

Rabies in a Human Being with Necropsy

Dr. Henry Hanson, Jacksonville: Patient, male, 9 years of age, was seen in consultation. Physician was called March 12, 1911, found patient suffering with severe throat symptoms and inability to swallow. Examination excluded diphtheria. Forcible depression of tongue temporarily enabled patient to swallow a little medicine. On attempting to drink water, it was forcibly expelled through the nose and mouth with general convulsion. After a few hours the attending physician found the patient much worse, nervous, respiration interfered with, muscles of deglutition paralyzed. The suspicions of the physician were aroused and inquiry was made as to the possibility of the patient having been bitten by an animal. It was found that three weeks previously a stray dog bit the boy severely on the calf of each leg. The patient was in bed three days before a physician was called, refusing food and drink, except small quantities of milk. During the course of the disease the thirst increased, but when water was brought, the patient would strike the glass from the hands of the attendant, or would jump out of bed in various directions, as though frightened. Death occurred on the afternoon of the fourth day, March 15. Permission for an autopsy was obtained. Post-mortem findings were characterized by their negativeness.

Microscopic examination, Anna Williams method: Bodies found within protoplasm of the large ganglion cells as described by Negri in 1903. Three rabbits inoculated, two subdurally (one dying from the operation), one intravenously. The two rabbits died with typical rabies on nineteenth and twenty-third days respectively. The brains of both rabbits showed Negri bodies in smears from Ammon's horn.

The Operative Treatment of Fractures

Dr. Clarence Hutchinson, Pensacola: I do not advocate the operative treatment in every form and type of fracture. It is with the fractures of the shafts of the long bones that we have most to deal, and these fractures, with their marked displacement, with their consequent impaired or lost economic efficiency, have made and are making woeful commentaries on our so-called surgical skill.

The operative technic is comparatively simple and due care reduces the risk practically to nil. Rigid asepsis is the key note to success in fracture cases. Moderate cleanliness is not sufficient. Special care must be exercised in the preparation of the field of operation. Large moist compresses of green soap applied to the field for several hours and even days if the skin is thick or horny, followed by a germicide. The incision should be along a line where there is a minimum chance of damage to important structures. The incision should be adequate to expose the site thoroughly. Avoid unnecessary handling of sponges and instruments and never introduce anything into the wound except instruments necessary for handling fragments. Remove all clots and keep wound dry. Do not burden tissues with unnecessary ligatures and suture material—one tier of sutures is usually sufficient. Put on strong plaster cast after operation and do not disturb wound unless indications are very positive for interference. Age is no barrier to operation; often the procedure is most strongly indicated in old persons. The shock is trivial. It is my rule to operate in all cases of fracture of the shaft of long bones in which there is marked displacement, especially where the economic efficiency of the individual is likely to be impaired from a questionable result.

Spontaneous Amputation of the Leg at Lower Third

Dr. Henry E. Palmer, Tallahassee: A negro male, aged about 70, three years before had an ulcer come under the fourth toe of the right foot; it resisted all treatment for a while and then remained without treatment five months; the foot began to swell and gangrene followed. He was in a semi-conscious state afterward from pain and morphin, which was liberally supplied. Several weeks later the foot suppurated at the ankle and he cut the few tendons with scissors. The flesh sloughed from the lower third of the leg, leaving the bone exposed 4 to 6 inches. In crawling down the steps the crippled leg caught and he fell, breaking the bone above the line of demarcation. A very good stump remains. This unusual termination illustrates the wonderful recuperative powers of some individuals under adverse conditions.

Huntington's Chorea

Dr. Ralph N. Greene, Chattahoochee: The patient, a negro male, entered the hospital for the insane twelve months ago with a diagnosis of Huntington's chorea. He had sustained a severe cranial wound in a railway accident, also gave a history of syphilis twelve years before.

DISCUSSION

Dr. J. H. Randolph, Jacksonville: Cases of chorea major are of sufficient rarity to warrant their exhibition. The occurrence of the condition in the negro race is of particular interest. Of five cases seen by me, only two, including this one, occurred in negroes. The majority of cases reported, are in males. Very little is known as to the etiology of the disease, although attention has been called to the possibility of its being an infectious disease of rheumatic origin.

Dr. R. N. Greene: This is the second case observed at the hospital. The other was a young white man who had had syphilis some years previous, was in the battle of San Juan and was injured by a fragment of a shell. Chorea developed after his return. In the present case the convulsive movements developed almost immediately after the injury, according to the statements of the patient. The convulsive movements are more marked now and have increased in severity.

Dr. R. L. Goodbread, Mayo: I have a case of chorea major under observation at this time. Patient is a male, age about 30, has been an officer of the law, wounded twice seriously; at times is a hard drinker; denies having had syphilis. His spasmodic movements are confined to one side. The mind is not affected, so far as can be seen now. His present employer says his work is satisfactory. In recovering from the attacks of the spasmodic movements he takes no morphin; but when sobering up from a drunken "spree" morphin is taken. He resents persons not familiar with him noting the spasmodic movements.

Purpura Fulminans, Complicating Malaria

Dr. F. Clifton Moor, Tallahassee: There is considerable doubt in my mind as to the relationship between the purpuric symptoms exhibited and a very definite coexisting malarial infection. Most recent authorities give their opinion that the different types of purpuric disease depend on the severity of the affection or the anatomic position of the hemorrhages rather than on any essential difference in the etiology or pathology of the disease itself. As to the etiology of the condition or whether there is any definite etiologic factor operating in all cases, there is a decided difference of opinion. My patient is a male, aged 4, of good physical development, but rather rachitic head. Family history negative, except for a slight hemophilic tendency in the mother and maternal grandmother. Two cases of malaria occurred in the family the previous summer. During the three months preceding the present attack, the patient has had two attacks of remittent fever lasting five to ten days at intervals of two or three weeks. Coincident with a rise of temperature, the child exhibited a decided convulsive tendency. Attacks were acute and marked by sudden rise of temperature to 103½-104 F., accompanied by convulsions or vomiting, or both. Remissions, and sometimes intermissions, of a few hours occurred. Examination of the blood showed the estivo-autumnal type of malarial parasite. During one of the attacks, after the administration of quinin, the examination was negative; Widal, negative. Fourteen days after last attack, at 2 p. m., there was a sudden rise of fever, vomiting and convulsion within an hour. Six grains of quinin had been given daily, up to a week before, for seven days. A smear taken immediately after the convulsion showed crescents in considerable numbers. The disease progressed, following Henoch's classical description, death occurring at midnight of the second day, without convulsions. Deaderick describes several irregular types of pernicious malaria due to actual clogging of the small vessels of the brain with plasmodia and blood cells, mentioning particularly an aphasic, hemiplegic and amaurotic type and states that the pathologic condition as noted above has been definitely demonstrated. If this is the case, a simular condition existing in the cutaneous circulation might well account for the particular symptoms of the case. The treatment was symptomatic.

Other Papers Read

The following papers were also read: "Rupture of the Uterus," by Dr. E. W. Warren; "Review of the Treatment of Epithelioma," by Dr. J. Lee Kirby-Smith; "Diagnostic Value of Lumbar Puncture," by Dr. James H. Randolph, Jacksonville; "Pellagra," by Dr. R. L. Goodbrad; "Preliminary Report on Latent Malarial Carriers," by Dr. Hiram Byrd; "Malarial Infection, Diagnosis and Prophylaxis," Dr. Henry Hanson; "Medical Inspection of Schools in Florida," by Dr. L. A. Bize; "The Eye and Its Relation to Medical Inspection of Schools," by Dr. F. P. Hoover; "Congenital Stenosis of the Pylorus," by Dr. D. C. Thompson; "Contract Practice," by Dr. M. L. Crum, Bowling Green; "Strangulated Inguinal Hernia in the Female," by Dr. H. A. Royster, Raleigh, N. C.; "Pellagra," by Dr. J. J. Watson, Columbia, S. C.; "Thoracic Surgery and Demonstration of Intratracheal Insufflation," by Dr. B. Merrill Ricketts, Cincinnati, Ohio; "The End-to-End Anastomosis of Blood-Vessels," by Dr. G. J. Winthrop, Mobile, Ala.; "Relation of Medical Examiner and Insurance Company," by Dr. R. H. McGinnis, Jacksonville.

ILLINOIS STATE MEDICAL SOCIETY

Sixty-First Annual Meeting, held in Aurora, May 16-18, 1911
(Concluded from page 1748)

The Abuse of Local Treatment in Gynecology

Dr. Henry T. Byford, Chicago: I wish to condemn the inadequacy of college instruction, and to criticize the different kinds of local treatment taught and used in a routine indiscriminate manner by many general practitioners. Iodin and phenol are applied to the cervix when not indicated, and are therefore useless in a large proportion of instances. Abstraction of blood from the cervix to relieve chronic hyperemia of the uterus and adnexa is useless and injurious. Glycerin and ichthyol tampons are of homeopathic efficacy and sometimes act as irritants. As a support the tampon is apt to do more harm than good. The copious high temperature douche accomplishes nothing, except to clean out vaginal discharges and give the patient unnecessary trouble. Medicated douches have a certain value when used intelligently and in a thorough way. I advise the judicious omission of all local treatment not based on definite rational indications. Patients who cannot and will not avail themselves of operations or who do not urgently need them, do better under a regulation of their habits and a correction of pathologic or abnormal conditions of the system in general than to depend on the routine indiscriminate local treatment. Some are made worse by it. Medical knowledge is as necessary for the gynecologist as surgical training; the exclusively surgical gynecologist is only half a gynecologist.

DISCUSSION

Dr. Thomas J. Watkins, Chicago: I would like to subscribe to what Dr. Byford said about the inefficiency of most topical applications in gynecology.

Dr. O. B. Will, Peoria: The American people are to-day busy in ferreting out and trying to rectify abuses of every kind. The medical profession is never backward in that line, but when it comes to placing blame on the general practitioners for abuse in this line, I would like to have it understood that specialists are to blame for these abuses, if such there are, in this line of treatment. The specialist changes his ideas with such rapidity that the ordinary practitioner is unable to keep up with him.

Functional Kidney Diagnosis

Drs. L. E. Schmidt and **H. L. Kretschmer**, Chicago: The phenolsulphonephthalein test has apparently been of distinct value in a large series of cases, permitting or aiding in selecting cases suitable for operation. It has been found to be of great value in cases in which there were lesions of the lower urinary tract and the mixed specimens of urine were used: it is equally valuable where the urines have been collected separately and where a consideration of the functional activity of one or both kidneys is to be considered. The carrying out of this test repeatedly on one and the same patient at intervals of three or four days has shown an increase in the rapidity of elimination of the drug as well as an increase in the percentage of drug excreted, both in the first and second hours; and accompanying this, a distinct improvement of the patient clinically during the period of time that preparatory treatment was given. To us this seemed of paramount importance—in fact, no other functional test has ever given us the same opportunity to make similar comparisons. Considering the ease and accuracy with which the test can be carried out —in connection with the ordinary modes of examination—it is by far the most adaptable, as well as accurate, of any of the functional tests in use at the present time.

The Euglobulin Reaction in the Urine

Dr. Arthur R. Elliott, Chicago: Euglobulin in the urine is demonstrated by treating the urine, diluted with distilled water, with 50 per cent. acetic acid in the cold. A diffuse cloudiness, intensifying on standing denotes the presence of euglobulin or nucleoproteid. Physiologic chemists are not agreed as to the exact nature of the proteid precipitated by acetic acid, some claiming it to be nucleoproteid, others euglobulin. It may be that under differing conditions either one or the other may exist in the urine or both occur simultaneously, although nucleoproteid is much rarer and of secondary clinical importance to euglobulin. The clinical conditions in which the reaction occurs are reviewed and attention directed to the value of the test in differentiating certain harmless forms of albuminuria (cyclical, orthostatic, residual) are characterized by the occurrence of euglobulin in the urine, associated with serum-albumin, and such urines give the acetic acid reaction. This reaction is not observed in the urine in chronic nephritis. When these two facts are placed together the test becomes of value as a means of differentiating harmless from serious organic albuminuria. As a rule the more abundant the reaction, the better the prognosis. The cases giving rise to perplexity in diagnosis are those in which albumin in the urine constitutes the only or almost the only symptom. It is in such cases that the acetic acid reaction may prove of value.

Diagnosis and Treatment of Infections of the Renal Pelvis

Dr. L. W. Bremerman, Chicago: A number of years ago I was treating these patients entirely by lavage of the renal pelvis, and eradicated the infection in the majority of cases, yet there were a small number that would not clear up so that the urine would be entirely free from bacteria. During the last two or three years I have been using, in combination with lavage, injections of autogenous vaccines, and my results have been nearly perfect. I have found that the cases all clear up much more rapidly this way than with either lavage alone or vaccines alone. The lavage is carried out about once every five days by injection, through the ureteral catheter, of a solution of one of the silver salts; silver nitrate solution is preferable. It is well, when using silver nitrate, to lavage the bladder with salt solution, leaving some in that viscus after the treatment to the kidney pelvis. If this precaution is not taken, the silver is apt to produce frequency of urination with tenesmus. The catarrhal and mild purulent forms will clear up very rapidly in some of the cases. I have seen cases in which from one to ten treatments were sufficient, the urine remaining quite bacteria-free, the symptoms all disappearing. These cases, however, are the more difficult to diagnose, and unless special care is taken the condition will be overlooked and will not be recognized until it becomes purulent, whereas if recognized early the pelvic infection may be eradicated absolutely.

Unilateral Pyelonephritis

Dr. E. Mammen, Bloomington: It is of the utmost importance that an early diagnosis be made; hence it is necessary to make frequent urinalyses when a kidney is suspected. Thoroughness will lead to the right solution of a puzzling condition. It is never wise to dismiss the patient with the assurance that his kidneys are all right. To do this will lead to error. Recently I removed a kidney containing 40 ounces of pus and a large calculus from a man whose urine was examined six weeks before, and the assurance given him that his kidneys were all right. If these kidneys can be detected early it becomes possible to treat them successfully by incision and drainage or decapsulation, or removal of the calculus. If, however, the diagnosis is not made until the parenchyma of the organ has degenerated, then nothing short of complete nephrectomy will suffice.

The Clinical Determination and Significance of Some of the Peripheral Signs of Aortic Insufficiency

Dr. Frederick Tice, Chicago: Of 124 cases observed by me clinically, the collapsing pulse was present in 118 (95 per cent.); the visible artery pulsation in ninety-five (76 per cent.); the capillary pulse in 112 (90 per cent.); the venous pulse in eight (7 per cent.); hepatic pulse in fifteen (14 per cent.); femoral snap in forty-three (45 per cent.); delayed arterial pulse in fifty (48 per cent.); double femoral murmur in 100 (88 per cent.), and in the femoral tones in twenty-six (24 per cent.). The typical collapsing pulse *per se* is not pathognomonic of aortic insufficiency. The collapsing character is not due directly to the amount of regurgitated blood, but is the result of vasomotor dilatation. Aortic insufficiency may exist without a collapsing pulse. A typical collapsing pulse may occur with perfectly normal and competent aortic valves, as is not infrequently observed in exophthalmic goiter and other diseases with vasomotor dilatation. The degree of the collapse of the pulse in an aortic insufficiency is no indication of the amount of regurgitated blood or the extent of the valvular defect.

Visible arterial pulsations, while very suggestive, are not pathognomonic of aortic insufficiency. The chief factor in their production consists of the arterial and capillary changes; the aortic valves may be normal and competent. Visible arterial pulsations are observed clinically in pseudo-aortic insufficiency of Lennhoff, v. Weissmayer and Huber, in exophthalmic goiter and other diseases associated with a high pulse-pressure. The capillary pulse is not pathognomonic of aortic insufficiency. Its presence depends on a disturbance of the capillary flow, in most instances a vasomotor dilatation and loss of arterial elasticity.

The double femoral murmur *per se* is not pathognomonic of aortic insufficiency. It is an artificially produced phenomenon. The essential portion of the phenomenon, the cardiodiastolic or arteriosystolic results from the backward flow of blood produced chiefly by the vasomotor dilatation. Aortic insufficiency may exist without a double femoral murmur. The phenomenon is observed in other diseases, with perfectly normal and competent aortic valves.

The Liberal Diet in Typhoid

Dr. J. L. Miller, Chicago: The general use of the milk diet in typhoid is due to the fear of injuring the ulcerated surfaces in the ileum. Milk, however, when it reaches the stomach, rapidly assumes a semisolid state on account of the action of the milk curdling ferment. Certain foods, as well-cooked cereals, soft-boiled or poached eggs, mashed potatoes, custards, jellies, gelatin, steam-cooked fruits, etc., are finely divided and cannot form hard masses on reaching the stomach. It has been shown that the typhoid patient's power of digestion and assimilation is only slightly impaired, and he can therefore properly dispose of food. The proteid loss in typhoid is very great and may exceed ½ pound of muscle daily. It has been shown that this muscle waste can be avoided by a proper diet. Carbohydrates and fats offer the best protection to the body proteids, and these must be given in large amounts, as in order to make up for the excessive waste the typhoid patient requires twice as much food as the normal individual. It is practically impossible to give these patients sufficient food to entirely prevent the destruction of the body proteid. They should receive, however, at least 3,000 calories daily. If this were administered in the form of milk between 4 and 5 quarts would be needed. The milk, furthermore, does not contain a sufficient amount of carbohydrates, as about two-thirds of the food should consist of carbohydrates. A suitable diet consists of 1 quart of milk and 1 pint of good cream (1,650 calories), four or five eggs (350 calories), 8 ounces of sugar (1,000 calories), making a total of 3,000 calories. The cream and milk may be given as cream soups, with cereals, as ice cream, etc. The sugar may be added to cereals, cooked fruits, or lemonade, or taken in the form of jellies, honey, etc. With the above as the basis of the diet, any soft foods may be added for variety. With such a diet the extreme emaciation and anemia can be much lessened and convalescence shortened. There is abundance of statistical evidence to show that the mortality danger of perforation and hemorrhage is considerably less on the liberal diet than on a pure milk diet. The only unfavorable results reported are the somewhat greater frequency of relapses.

Cancer in Domestic Animals

DR. MAXIMILIAN HERZOG, Chicago: Popularly, all malignant tumors are generally called cancers; scientifically the term ought to be limited to the carcinomata, the atypical epithelial neoplasms. These in domestic animals, on the whole, show the same histologic and clinical properties as in man. However, they vary more in their clinical characters as to malignancy. They may assume a large size without necrotic and ulcerative changes. They may exist for a long time without producing metastases. On the other hand, they may early lead to necrosis and to metastatic formation. The connective tissue matrix in which they grow may show a very profound reaction or there may be practically no reaction at all. The epithelial cells of the carcinomata in domestic animals frequently go through their normal changes, such as cornification, colloid formation, etc., or they may exhibit metaplastic transformation. Calcareous deposits in carcinoma in domestic animals are more frequent than in man; osseous tissue is likewise frequently found. This may be due to early invasion of bone, with subsequent osteoplastic processes or to embryonic inclusions of osteogenetic tissue. While carcinoma in man among the civilized races is undoubtedly on the increase, we are unable to state whether the same is true of these malignant tumors in domestic animals. We do not possess up to date any reliable vital statistics concerning this point in domestic animals. Carcinomata in the latter frequently develop after a so-called precancerous state represented by long-continued irritation or inflammatory or other hyperplasias, catrices, etc.

The Present Status of the Etiology of Cancer

DR. F. ROBERT ZEIT, Chicago: It is known that absolute failure accompanies any attempt to inoculate animals with malignant tumors from other than the same or nearly related species of animals. The inoculation tumors may grow to such a size as to exceed the weight of the animal. The tumor cells of the successfully transplanted tumors are descendants of the implanted cells and retain the characteristic histology of the primary growth for many generations, as shown by Loeb. Transplantation can be carried on for many generations with increasing virulence. Rapidity of the growth of these transplanted tumors cannot be influenced by mechanical stimuli. Metastases do not occur; at least, they are very rare. In rare cases the transplanted carcinoma stroma may become sarcomatous.

Other Papers Read

The following papers were also read: "The Health Conscience and the Drink Problem," by Dr. C. B. Johnson, Champaign; "The Diagnosis of Acute Poliomyelitis," by Dr. L. H. Mettler, Chicago; "Double Hernial Sacs," by Dr. D. D. Lewis, Chicago; "Intestinal Toxemia," by Dr. M. H. Mack, Chicago; "A New Theory as to the Mechanism of Skull Fractures, and an Analysis of One Thousand Cases," by Dr. F. A. Besley, Chicago; "Arteriosclerosis," by Dr. M. A. Marcy, Peoria.

AMERICAN ORTHOPEDIC ASSOCIATION

Twenty-Fifth Annual Meeting, held at Cincinnati, May 15-17, 1911

The President, DR. A. H. FREIBERG, Cincinnati, in the Chair

Officers Elected

The officers elected are named in THE JOURNAL, this issue, under General News.

Standardization in Orthopedic Instruction and Practice

DR. ALBERT H. FREIBERG, Cincinnati: Orthopedic surgery is the surgery of chronic conditions. For this reason, changes for the better or the worse are the more difficult to appreciate. For instance, witness the great difference in opinion regarding the progress made in the correction of scoliosis. This is due less to the inequality of results than to variation in methods of mensuration and recording. I wish to plead for a recognition and determination of standard methods in mensuration and treatment, and in methods of instruction to patients. It would also be well to look for a plan by which every new method should be granted a careful trial by experienced, reliable men, to be made, if possible, with the cooperation of the proposer of the innovation. This might be accomplished by the establishment of a standing committee, to whom such questions might be referred. Perhaps another field of usefulness for such a committee would be in giving an expression of opinion as to the ideal preparation of the graduate who expects to specialize.

Use of Tuberculin in Joint Tuberculosis

DR. GEORGE B. PACKARD, Denver: In many cases in which there had been discharging sinuses for a long time, and in which there was mixed infection, the results were excellent without an autogenous vaccine. Though cultures were not made, it is probable that in these cases the active organism was the staphylococcus. If there was the slightest question as to the diagnosis, the Moreau or the v. Pirquet test was made, and always found positive. Skiagrams and microscopic examination of the material obtained by curettement confirmed the diagnosis, also in a case in which the secondary infection was severe and the reaction marked from tuberculin alone, without an autogenous vaccine. I would not use tuberculin as a routine treatment in all cases of joint tuberculosis. When either children or adults are doing well, and there is no evidence of the disease being active or progressive, and when the general condition is satisfactory, I would not use it; but when the disease is progressive and painful, in spite of protection and other general measures, I consider tuberculin to be a valuable adjunct to the treatment.

Spengler's I. K. Serum in Joint Tuberculosis

DR. JOHN L. PORTER, Chicago: Our present knowledge in regard to calculating the dosage is inadequate. Better results can be obtained when the dosage has been perfected. The giving of but one dose in seven or eight days has been found to be more satisfactory than more frequent dosages. Marked disturbance of the patient's comfort is the best guide for a reduction of the dosage. Too great a desire to hasten the cure will usually result disastrously. Contamination must be guarded against. The posterior exterior surface of the forearm, while the arm is held in flexion, is the most convenient and least painful site for the injection. Children seldom complain of the procedure, if the solution is injected slowly. Tincture of digitalis and strophanthus should be administered throughout the entire treatment. Patients with severe or advanced heart lesions should not be treated with I. K. solution until complete compensation has been restored; and then only while in bed and with the greatest care and careful dosage. Jumping to a ten-fold dosage is both dangerous and unnecessary; and it is seldom that patients can tolerate this increase. When rapid immunization is desired, it is better to begin with a small dose of a higher dilution. Then, after an interval of ten days, this can be increased, up to lysis. A relatively small daily liberation of antitoxic immune substance could be better calculated by the physiologic blood force. I believe that I. K. serum has some curative properties and a constitutional effect on patients with tuberculous joints, and that it is worthy of further trial.

Joint Tuberculosis in Children

Dr. Leonard W. Ely, Denver: The orthopedic surgeon is responsible for part of the confusion that exists as to the treatment of joint tuberculosis. In the past, there has been a tendency to dwell too much on the non-essentials and to magnify points of difference. There are three reasons for the confusion, and three main rules of treatment on which one may unite, based on clinical experience and on laboratory study: First, deprivation of function; second, avoidance of secondary infection; third, fresh air and good food. In addition let us always emphasize the fact that radical operations are out of place in children's tuberculous joints.

DISCUSSION

Dr. Herbert H. Galloway, Winnipeg: What support is there for the contention that the focal reaction produced by the subcutaneous injection of old tuberculin is dangerous? I feel that it is exceedingly valuable in doubtful cases, and have never had occasion to regret its use.

Dr. William S. Baer, Baltimore: I do not like the use of the Calmette reaction, because cases have been reported in which serious damage has been done to the eye by it; and it gives no information that the v. Pirquet does not afford. I use the latter first, to see whether there is tuberculosis anywhere in the system, and then employ the injection method, if the v. Pirquet is positive, in order to get a local reaction.

Dr. James K. Young, Philadelphia: Under certain precautions, there is no danger in the Calmette test. The eye should not be diseased at the time, and should subsequently be protected.

Dr. Edwin W. Ryerson, Chicago: The great value of the Calmette and v. Pirquet reactions is when they are negative. I have seen a case in which after the injection of one milligram of old tuberculin a tuberculous peritonitis occurred. It resulted in such speedy death that I thought the injection had been instrumental in producing it.

Dr. Sydney M. Cone, Baltimore: It is true that negative reactions are more valuable than positive. I prefer the v. Pirquet test to the others.

Dr. G. G. Davis, Philadelphia: I do not believe in using the Calmette reaction. There is no more obstinate affection in childhood than tuberculous inflammation of the eye; and when an inflammation is started in the eye of a tuberculous child, no one knows when it will stop. The v. Pirquet test is absolutely without objection.

Treatment of Hip Disease

Dr. Edward H. Bradford, Boston: Hip disease tends to deform the limb with destruction of the head and widening of the acetabulum. Thorough treatment should overcome this tendency. The threatened deformities are most effectively combatted by the employment of traction during the deforming stages of the disease.

The Conservative Treatment of Hip Disease

Dr. James K. Young, Philadelphia: The treatment of hip joint disease should be based on the pathology as shown by the clinical symptoms confirmed always by the skiagram and where possible by exploratory puncture. Mechanical treatment, to be thorough and efficient, should combine absolute fixation of the pelvis and entire lower extremities, including the foot and combined with moderate traction.

DISCUSSION

Dr. B. E. McKenzie, Toronto: I think Dr. Bradford could have used the Bradford frame to secure fixation and prevention of deformity. Through its use, one may bring down a femur that has risen up into the pelvis. I believe that the greatest force in the treatment of tuberculous bone-disease is the proper use of the sun's rays. I have given up the use of a brace for any kind of hip disease, except during the period of convalescence.

Dr. Clarence L. Starr, Toronto: In my treatment by means of traction and extension, I encountered the difficulty of atrophy of the bone. I should like to know whether Dr. Bradford's apparatus does not produce this, as does plaster of Paris. My experience is that the atrophy is no worse in the case of patients subjected to treatment in bed than in those that have been allowed to be up and around, and that it disappears to a great extent subsequently. I should also like to know whether Dr. Bradford gets correction of the flexion deformity with that apparatus.

Dr. E. H. Bradford, Boston: I use my frame in the acute stages for a short time, but the other method of treatment allows the child to walk around. The trouble with Dr. Young's apparatus is that the child cannot sit down well with it on. I have given up peroneal straps, because either the child or the nurse can loosen them. A skiagram would show that there is not the amount of traction that there should be, and the child cannot move the upper part of the body freely. I do not get much atrophy. The muscles, of course, do not develop as well as those of the leg in use; but they do increase somewhat with the splint on. You can get as much abduction with my apparatus as you wish.

Dr. J. K. Young, Philadelphia: I think my splint affords the combination of traction and fixation.

Cyst of the Upper End of the Femur, Simulating Hip Disease

Dr. David Silver, Pittsburg: A boy, aged 5 years, presented a limp, limitation of motion, trochanteric thickening and atrophy of the thigh. A radiogram showed a cyst with fracture of the inner wall of the neck. At operation a cavity was found filled with sterile fluid and no lining membrane was seen. At a second operation, nearly two years later, for return of the limp, a dense lining membrane was present; and examination showed changes characteristic of osteitis fibrosa.

DISCUSSION

Dr. Henry L. Taylor, Montclair, N. J.: I operated in a case of cyst of the base of the neck of the femur in which the symptoms were a little obscure, but entirely different from beginning hip disease. The skiagram cleared up the diagnosis, showing a spot about the size of a dime, with enlargement of the bone inward over this area. A later observation showed that the cyst was about to perforate. I cut out a piece the size of a nickel, and the boy is perfectly well now, three years after the operation.

Dr. G. G. Davis, Philadelphia: Dr. Silver has described the growth as osteitis fibrosa. There is nothing indicative of malignancy in that diagnosis. I have had a case of cyst of the end of the ulna, in which, after breaking in the thin wall (there being no proper lining membrane) I found some bloody clot; and up in one corner was a small amount of granulation tissue, which, when submitted to the microscope, showed beautiful myeloid giant cells. Therefore, you could call it a giant-cell sarcoma; yet the amount of new growth was extremely small. It is a question whether these two classes are not simply slight variations of the same kind of growth, those in which there is much proliferation being called myeloid sarcoma, and the others osteitis fibrosa.

Dr. B. E. McKenzie, Toronto: I had a similar case in a woman 40 years of age. The cyst contained a bloody serous fluid and had no lining membrane. No curetting was done. Two years and a half have elapsed since the operation, and there is no indication of a reappearance. I also had a case that proved to be a chondroma of the hip. Though not a cyst, it was regarded for a long time as a case of hip disease. The growth was removed by curettement. I adjusted the leg in a fully abducted position, allowing the ends of the bone to overlap and good union was obtained.

Dr. W. S. Baer, Baltimore: I think that the treatment has to be followed out according to the pathology in each particular. On the whole, I wonder whether curettage is better in the long run. When there is any *chance that the cyst is* epitheliomatous in character, amputation should be done, and no attempt made to save the member.

Dr. Alexander R. Colvin, St. Paul, Minn.: I have had two cases in which cysts not operated on have practically obliterated themselves.

The Prevalence of Infantile Paralysis in Missouri

Dr. James A. O'Reilly, St. Louis: The disease is sporadic over the entire state, but the great majority of the cases are in the northwestern and western portions. The greater number of patients live in the country, and away from railroads or electric lines. Comparing the cases in 1911 with those in the five years previous to 1910, it is seen that the *disease is becoming much more prevalent, and that it* amounted to an epidemic in 1910.

Dr. Robert B. Osgood, Boston: During the last year, Dr. Lucas and I have been making some transmission experiments in regard to poliomyelitis. We were able to transmit the disease *from the tonsils and adenoid tissues of monkeys* as late as five months and a half after the attack was over. We *also tried to transmit the disease from the nasopharyngeal* mucosa of a monkey that had been kept alive by careful nursing, and found the germs present at the end of five and a half months. Later, we obtained the tonsils and adenoid tissue removed from a little girl six months and ten days after having had a spastic paralysis from this disease. The preparation from these was injected in various amounts into *three monkeys. One of these animals developed typical signs* of the disease accompanied with paralysis. This shows that human adenoid and tonsillar tissue can preserve the virus while no other symptoms of acute diseases are present.

The Operative Treatment of Knee Derangement

Dr. Nathaniel Allison, St. Louis: In spite of the fact *that the diagnosis is usually easy,* some cases that present the symptoms and signs of internal derangement at the knee show nothing abnormal when the joint is opened; and some cases have *typical* derangements in the knee, but do not present symptoms or signs tallying with any recognized picture. In these cases, exploratory arthrotomy is advisable and useful. A careful, clean operative technic, however, is absolutely essential. Conservatism must have been responsible for many old chronic knees, which might have been saved for joint function by simple arthrotomy.

DISCUSSION

Dr. S. M. Cone, Baltimore: In regard to arthrotomy, we should be guided a good deal by what is found to be the cause of the trouble at the joint. Different organisms produce different conditions, of varying seriousness.

Dr. H. L. Taylor: Most authors claim that imperfect extension is one of the cardinal *signs of a chronic* derangement of the semilunar cartilage, and we have also been used to looking at tenderness over the semilunar cartilage as a sign of this condition. I had a patient who had *neither.*

Dr. J. E. Goldthwait, Boston: I have never seen a case of semilunar derangement in which complete extension was limited and in which it was not possible to relieve the condition by manipulation, unless the anterior third of the cartilage had been turned on itself, so that the section of it lay directly between the condyles. This is a very common thing to find.

Dr. R. B. Osgood, Boston: The communication between the anterior and the posterior portions of the capsule is normally very narrow; and a foreign body *in the* posterior portion cannot be removed by means of an anterior incision unless one cuts through the lateral ligaments. In such cases, it is much better to make a posterior *incision.*

Dr. Charles F. Painter, Boston: Exploratory arthrotomy and *abdominal operations should be very rarely done.*

Dr. W. G. Stern, Cleveland: Lately, many surgeons have *been injecting* a solution of formaldehyd and glycerin into the knee-joint, with *the idea of preventing* infection and *rendering operations on the* knee-joint less dangerous. I have had patients treated in this way in whom severe infec*tion had taken place, and I do not think that* the method renders these operations less dangerous.

Dr. John J. Nutt, New York City: I do not think that brace treatment can be considered good, unless it relieves the patient's apprehension.

Dr. G. G. Davis, Philadelphia: My experience with formaldehyd and glycerin is that unless the patient is anesthet*ized, the injection is an exceedingly* painful procedure. One may open the knee-joint to remove synovial fringes, and fail to obtain motion again. *In a great many of these* apparently traumatic cases, if the joint be opened, a condition that, just for convenience, I *would term rheumatic* supervenes; and the patient is left with a more or less permanently crippled joint, in spite of the fact that primary *union has occurred with no evidence of infection.*

Dr. N. Allison, St. Louis: With the absolutely necessary careful technic, the knee can be opened without any more fear on the *part of the surgeon than* he would feel in opening the abdomen. If the patient can be relieved in three weeks' time by means of operation, this is better than the *wearing of a* brace. I am not in favor of exploring knees when no symp*toms have been made out; but in many* cases the typical symptoms are not seen.

Tendon Transplantation and Silk Ligaments

Dr. E. W. Ryerson, Chicago: If possible, the skin incisions should be so placed that the line of suture will not lie directly over the insertion of the silk. Strong braided silk is much better than several strands of finer silk, which tend to cut through. The value of silk ligaments in suspending the foot *at a right angle in cases of drop-foot has undoubtedly become* firmly established. The method is safer, easier and far more rational than the excision of a diamond-shaped piece of skin from the front of the joint. In the technic I have used for some time, the chief advantage is that the cords are passed beneath the annular ligament of the ankle, instead of merely beneath the skin. *Plain corrosive-sublimate silk is apparently free from disadvantages. It seems advisable to omit* drainage entirely. It is a good idea to apply a coating of sterile petrolatum to the skin wound and the surrounding skin. *After the cast has been applied, a window is cut out over each incision,* in order to allow the wound to dry and to facilitate dressing and the removal of the stitches, which should not be removed before the end of two weeks.

The Use of Intra-Articular Silk Ligaments for Fixation of Loose Joints in the Residual Paralysis of Anterior Poliomyelitis

Drs. Bernard Bartow and William W. Plummer, Buffalo: *The intention, by this plan, is to secure* closer approximation of the loose articular surfaces, and to limit motion in certain directions, by placing check ligaments within the joint. These excite *reactive inflammation, followed by* organization of exudates, as a further limiting process. Resistance is thereby supplied to diminish or prevent deflection of the limb from the weight-bearing axis.

The Treatment of Paralytic Outward Rotation of the Foot

Dr. Gwilym G. Davis, Philadelphia: In the *treatment* of infantile paralysis external rotation of the foot is often a troublesome feature. To overcome it I use, in some cases, straps or bands passing from a pelvic band to an apparatus *fastened to the foot. In other cases,* make an incision in the region of the greater trochanter, and while the foot is rotated strongly inward, sew, with silk sutures, the overlying fascia fast *to the posterior edge of the* greater trochanter beneath. In cases in which the tensor fasciæ femoris muscle is not paralyzed, this muscle can be loosened and its lower end turned posteriorly *and* sewn posteriorly on the greater trochanter and upper portion of the shaft of the femur.

What is to be the Attitude of the Orthopedic Surgeon with Regard to the Child with Congenital Ptosis of the Abdominal Viscera?

Dr. Joel E. Goldthwait, Boston: The type of child I wish to consider is the one who stands in an incorrect attitude, with the stomach out, etc. Such children have the arrangement of the visceral supports that is found in quadrupeds. One person in every five is born before the embryologic changes that differentiate the human species from the quadruped have taken place, as these occur in the latter part of embryonic life. The results are not appreciated until the children begin to walk. They have bilious attacks and difficulty in their nutrition, and later have round shoulders and various other deformities. The viscera slip down, and it is impossible to put in new supports. If, however, we can save the strain on a ligament, it will contract, though it may have been stretched considerably. If we can give a little support to the viscera, the children will stand better. We must use the force of gravity in such a way that instead of its constantly making the position worse, it pulls the parts to where they should be. The retroperitoneal fat, which is absorbed when the organs are dragged down, must be replaced in order to get the shelf of sufficient size to hold the viscus. Making the patients lie in bed with supports properly arranged will do much to accomplish this. They should assume this position two or three times a day.

DISCUSSION

Dr. Compton Riely, Baltimore: If the pelvis is tilted forward, it is a mechanical impossibility to get the ribs separated and the lungs expanded. In the treatment, one should make an effort to have the patient tilt the pelvis backward. This has to be done largely by means of exercise, especially of the leg muscles, doing away with heels on shoes, if possible.

Dr. H. L. Taylor: A physical trainer in New Jersey who has had considerable success with neurasthenics devotes almost his entire attention to cultivating the abdominal muscles. One of his favorite exercises is standing on the head. The old knee-chest posture of gynecology might be a good one to have the patient assume. I have seen many neurasthenics who had none of these faults in posture, and numbers of persons who had them were not neurasthenics and had no arthritis deformans.

Dr. John Dunlop, Washington, D. C.: I have found the stomach of such patients in the knee-chest position to be 5 or 6 inches higher than when they were trying to stand.

Dr. J. E. Goldthwaite, Boston: A good exercise is to have the patient crawl off the edge of the bed, letting his head hang to the floor, keeping this attitude long enough for the muscles to tire and the organs to sag back. Exercise should be kept up almost indefinitely. These people are not all invalids, and many have a reasonable degree of efficiency; but many tuberculous patients are poorly nourished for the reason that the machinery is not working right on the inside. The knee-chest position has the disadvantage of causing an additional sacro-iliac strain.

The Prevention and Cure of Foot-Strain

Dr. Robert B. Osgood, Boston: The most common predisposing cause is abnormal muscle balance and the most common exciting cause, the modern ready-made shoes. An important point in reaching the diagnosis is the examination of the patient's well-worn shoes. If the muscle balance is nearly or quite normal, the symptoms being due to bad foot-wear, various flexible-shank shoes may be used. In other cases, rest in some form is the most rational immediate treatment. Persons beginning occupations that require a greater number of hours on the feet should take precautions against foot-strain by employing proper shoes.

A Removable Plaster Corset for Structural Scoliosis

Dr. David Silver, Pittsburg: The advantages of the removable plaster corset are cleanliness, freedom from pressure, allowing the opportunity for frequent inspection, and permitting of the use of corrective exercise (in recumbency), either during the entire period of treatment, or in the later stages. The neck portion comes well up on the base of the neck. Instead of carrying the plaster up to the neck, it may be stopped at the shoulders and a metal neck and shoulder attachment used. The plaster corset may be reproduced in leather or metal.

DISCUSSION

Dr. W. Truslow, Brooklyn: If we begin the use of the corset before proper correction has been obtained, we have to meet the problem of the lack of symmetry of the form to mold the material over. The neckpiece is extremely uncomfortable, and patients do not like to wear it. I prefer a corset made of celluloid, with a simple opening in front. It can be reinforced with strips of metal.

Dr. W. G. Stern, Cleveland: Celluloid is objected to by many on account of the danger of fire. If crystals of the chlorid of iron are added to the celluloid for the middle layer of the jacket, the material will be made practically non-inflammable.

Dr. D. Silver, Pittsburg: I do not think the neck-piece is uncomfortable, especially the metal one, because it can be bent until it fits comfortably.

An Unusual Pathologic Condition of the Sacro-Iliac Joint, Causing Sciatica

Dr. Sydney M. Cone, Baltimore: I had two interesting cases, one a case of osteophytic growths following a railroad accident to a healthy man, aged 34. The patient injured his left pelvic region, and after a long period of invalidism was treated for sciatica and sacro-iliac loose joint for several years. *X*-ray examination and physical examination showed bony growths about sacro-iliac joint. At operation several bony growths were removed at this joint and about the great sacro-sciatic notch. Patient was promptly relieved. The second case was treated for a year or more for loose sacro-iliac joint. *X*-ray showed thickening of tissues above the acetabulum of left hip. Exploratory operation showed the joint to be normal, but periosteum thickened and chronically inflamed. Operation revealed thickened periosteum and a small osteophytic growth at the great sacro-sciatic notch. Curetting of this resulted in complete relief from all symptoms.

Peroneal Spasm

Dr. Charles F. Painter, Boston: The rigidity of the peroneal muscles is very difficult to overcome, and no satisfactory explanation has been offered as to the cause of this phenomenon. I found in the tendon sheath, just where it began to play into the groove, an articular facet, which was not a part of the groove; and in the tendon there was a body that could be felt distinctly, causing the tendon to expand in both directions. I dissected this body out, and left the tendon intact. I left the foot entirely free. The second day after the operation, I could move the foot in any direction. The patient has had no recurrence. I performed the operation later in a series of similar cases, all but one of which resulted satisfactorily. In this case, it was difficult to tell how much of the rigidity was due to bony deformity, and how much to peroneal spasm. In view of the anomalies that anatomists have found to exist in the tarsus, I think that this might be a possible explanation of the condition.

Mutton Tallow and Iodin as a Substitute for Bismuth Paste

Dr. David Silver, Pittsburg: Mutton tallow was used because it was felt that an animal substance would be better material to inject into the body than a mineral. It is generally supposed that mutton tallow becomes rancid easily, but a specimen that I had for a long time failed to show any evidences of this. The sinuses in which this substance is used are distinctly drier than are those injected with bismuth paste. This fact also makes the tallow better than petrolatum.

A Simple Splint for Snapping Knees

Dr. A. J. Steele, St. Louis: In this condition, in which the epiphysis is separated from the diaphysis, I presume that the ligaments are too long, so that the bone slips out and is forced back again. It occurred to me that if the tibia and the femur slipped at all, it must be a lateral slip, and that it would be a simple matter to put a small brace that would not interfere with motion on each side of the knee. I devised this, which is a small sole-leather affair, slit at the back, and with straps going around the front. My patient has worn it continually for five or six months, and the snapping has pretty much passed away.

Pott's Paraplegia of One Year's Standing; Laminectomy; Almost Complete Recovery

Dr. Emil S. Geist, Minneapolis: The location was the third and fourth dorsal vertebræ. Laminectomy was done, and an extradural abscess communicating with the posterior mediastinum was found. Drainage was allowed to remain in for three months. A beginning return of sensibility was noted four months after the operation. Motion and sensibility has entirely returned by the end of nine months after the surgical procedure. A brace was applied, and walking begun. The patient had an attack of pneumonia and pleurisy two months later, which ended in death. I have here the pathological specimens, gross and microscopic.

Other Papers Read

The following papers were also read: "Use of Tuberculin in Orthopedic Surgery," by Dr. W. G. Stern, Cleveland; "Treatment of Flexion and Abduction Deformity of the Thigh by Changing the Angle of the Femoral Neck," by Dr. J. A. O'Reilly, St. Louis; "Case of Coxa Vara," by Dr. J. Ridlon, Chicago; "Prognosis in Chronic Arthritis," by Dr. C. P. Painter, Boston; "Results of Treatment of Scoliosis at the Boston Children's Hospital," by Drs. R. W. Lovett and J. W. Sever, Boston; "The Anterior Heel," by Dr. A. G. Cook, Hartford, Conn.; "The Operative Approaches to the Hip-Joint," by Dr. E. G. Brackett, Boston; "Further Study of the Lumbo-Sacral Articulation," by Dr. J. E. Goldthwait, Boston; "Dyschondroplasis," by Dr. C. E. Coon, Syracuse; "Pathogenesis of Spur Formation on the Os Calcis," by Dr. R. G. Meisenbach, Buffalo; "Results of Muscle Group Isolation in the Treatment of Spastic Paralysis," by Dr. M. Allison, St. Louis; "Further Experience with Volkmann's Ischemic Paralysis by the Method of Robert Jones," by Dr. R. H. Sayre, New York City; "Exercise Treatment of Paralysis," by Dr. C. H. Bucholz, Boston; "X-Ray Studies of Arthritis Deformans," by Dr. G. R. Elliott, New York City; "Treatment of Scoliosis," by Dr. E. H. Bradford, Boston; "Orthopedic Treatment of Fractures of the Humerus," by Dr. F. E. Peckham, Providence, R. I.; "Suggestions as to Notes and Records in an Orthopedic Hospital," by Dr. D. B. Gibney, New York City; "A Modified Genuclast," by Dr. P. Hoffmann, St. Louis; "Bilateral Congenital Dislocation of the Lower End of the Ulna," by Dr. S. F. Jones, Denver; "Psoas Abscess from Retroperitoneal Lymph Glands," by Dr. M. H. Rogers, Boston; "Traumatic Arthritis as a Late Complication of Fractures of the Upper Extremity," by Dr. P. LeBreton, Buffalo; "Skiagraphic Study of Brittle Bones," by Dr. R. Hammond, Providence, R. I.; "The Adolescent Tibial Tubercle," by Dr. J. Dunlop, Washington, D. C.; "An Operation for Severe Grades of Claw Toes," by Dr. P. Hoffmann, St. Louis; "Correction of Relapsed and Untreated Cases of Equino-Varus," by Dr. M. Hoke, Atlanta, Ga.

ASSOCIATION OF AMERICAN PHYSICIANS

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(Concluded from page 1751)

Renal Decapsulation in Chronic Nephritis in Children

Dr. Henry Koplik, New York: The number of patients operated on so far is limited; the operation is not curative, but undertaken only in cases in which relief from the symptoms of nephritis has failed by all other means, medicinal and dietetic. The operation itself does not endanger life. The improvement in the symptoms after operation has been striking in spite of the persistence of urinary signs of marked disease of the kidney. The freedom from symptoms is combined with a status of well-being lasting in some of the cases for a period of years. Exposure or indiscretion will not exempt the operated case from recurrence of edema and other symptoms, but the patients, as in one of the cases reported, recover promptly and remain well for a time, showing that the operation has not crippled the recuperative powers of the kidney.

DISCUSSION

Dr. G. L. Peabody, New York: I have had a number of these patients operated on with satisfactory results, as a rule. In one case the operation was done four successive times in a period of two years; after each operation a recurrence of symptoms took place, with a marked degree of anasarca closing the boy's eyes so he could not see and after each operation the improvement was marked and lasted for a number of months. He would disappear from the hospital and then come back again with headache, vomiting and almost complete suppression of urine, and in four instances the symptoms were relieved by removing the capsule which reformed after each operation.

Dr. James Tyson, Philadelphia: Recovery is not always prompt. It was quite delayed in two cases, but it occurred none the less. A marked symptom following operation was enormous diuresis, going to show that something must have occurred consequent on freeing the kidney from pressure or obstruction.

Dr. Lewis A. Conner, New York: In one case of severe bichlorid poisoning with complete aneuria absolutely no impression was made on the kidney by the operation. That bears out Dr. Koplik's contention that the acute cases are not necessarily the most favorable.

Dr. James Tyson, Philadelphia: It has been questioned whether there is any advantage in operating on both kidneys. In the first, and, perhaps, the most prominent case, the kidney was operated on. Four weeks later the second kidney was operated on, but without any particular improvement.

Fever, Its Nature and Significance

Drs. V. C. Vaughan, James G. Cumming and John H. Wright, Ann Arbor, Mich.: In 1909 Vaughan, Wheeler and Gidley showed that continued fever can be induced in rabbits by repeated subcutaneous injections of egg-white and certain other proteins. This work has been continued, and it has been demonstrated that by varying the dose and the intervals between doses one can induce an acute, an intermittent, a remittent or a continued fever in rabbits by injections of foreign protein. Furthermore, it has been shown that by repeated intra-abdominal injections of various bacteria, acute fever, followed by immunity, will be produced. The authors hold that fever results from the parenteral digestion of proteins, and that fever must be regarded as a conservative process, although, like many of Nature's processes, it often leads to disaster. Its purpose is the disposal of foreign, dangerous material, and, therefore, it must be regarded as beneficent.

Effects on Blood-Pressure of the Various Anatomical Components of the Hypophysis

Drs. Joseph L. Miller, Dean D. Lewis and S. A. Matthews, Chicago: We have been able to demonstrate that the anterior lobe also contains a pressor substance, but its action is usually masked by excessive amount of depressor substance present. By first removing the depressor substance by extracting with alcohol, it was possible to demonstrate a pressor substance in the anterior lobe. It was determined that this pressor substance is confined chiefly to that portion of the anterior lobe adjacent to the cleft and which histologically is pars intermedia. Both portions of the posterior lobe contain a pressor substance. Cysts of the pars intermedia and colloid from the cleft, the secretion from the pars intermedia, have a distinct pressor effect. It is scarcely probable that the tissues so entirely different as the pars intermedia and pars nervosa should contain a pressor substance. Herring's theory that the secretion from the pars intermedia passes into the pars nervosa would explain these findings.

Failure to detect any pressor substance in the infundibular process, or stalk, might be interpreted as unfavorable to the view that the pressor substance passes through the stalk to the third ventricle.

Sporadic Elephantiasis

Dr. W. Gilman Thompson, New York: I saw four cases of elephantiasis occurring in persons who had never been in foreign countries and therefore were never exposed to filaria. Neither filaria nor plasmodia were revealed by blood examination. There was nothing to throw light on the etiology. There was found considerable hypertrophy of the entire skin. The fibrous tissue was enormously increased. There was the usual corneal edema. There was great enlargement of the sweat glands, and the lymphatics and blood-vessels were considerably increased in size. Only one of the four cases did not give a history of periodical febrile exacerbations.

Dr. F. C. Shattuck, Boston: The conclusions which I came to in a recent paper on elephantiasis was that none of the theories in regard to the etiology of this disease is adequate. I believe the cause is either multiple or else entirely unknown in its basic principles. In a number of cases I believe that chronic infection is an element in the causation.

An Experimental Study of the Pain Sense in the Pleural Membranes

Dr. Joseph A. Capps, Chicago: In hydrothorax the presence of fluid frequently so retracts the lungs and flattens out the diaphragm that the conditions are favorable for testing the sensation of the pleural membranes. This experiment was carried out by means of a long wire inserted through the hollow cannula after thoracentesis. Thirty-five cases were thus explored with the following results: The visceral pleura gave no pain response to irritation. The parietal pleura was sensitive to slight pressure and the pain was accurately referred to the region irritated. The posterior third of the diaphragmatic pleura gave no pain response to irritation. The parietal pleura was sensitive to slight pressure and the pain was accurately referred to the region irritated. The posterior third of the diaphragmatic pleura and a margin 1 to 3 inches broad near its peripheral attachment responded with pain over the lower thorax and abdomen. The remaining portion of the diaphragm when irritated was characterized by pain in the neck region. The pain elicited from the pericardial pleura was also referred to the neck. The neck pain was sharp and localized in a small area of skin, usually situated over the ridge of the trapezius muscle, an area which receives its sensory innervation from the third and fourth cervical segments. This pain is true referred pain and is transmitted from the diaphragm to the posterior cervical cord by the phrenic nerve. These experiments make it possible to map out quite definitely the portion of the diaphragmatic pleura which receives its sensory supply from the phrenic nerve, and the portion which receives its supply from the intercostal nerves.

Is There a Specific Treatment for Diabetes Mellitus?

Dr. Henry Sewall, Denver: Evidence has been presented that in a certain proportion of diabetics beyond middle age the metabolism and general symptoms may be improved and the sugar removed from the urine, at least temporarily, through the administration of an infusion of lean meat acidulated with hydrochloric acid. In a single case of youthful diabetes, though neither beef infusion nor pancreatic infusion was alone efficacious, when the one followed the other, or a mixture of the two, after an interval of some hours, the urine became sugar-free. After the disease had persisted for some months this happy result could no longer be obtained. Nevertheless, the treatment, especially with the beef infusion, seemed to improve the subjective condition of the patient. No good results attended the use of the commercial pancreatic powder employed.

DISCUSSION

Dr. S. J. Meltzer, New York: The fact is dwelt on by Dr. Sewall that if you add sugar to muscle extract and pancreas the sugar disappears. Recent work in the Rockefeller Institute shows that the sugar does not disappear at all, but is simply converted into higher sugar. Therefore, can it be said that in Dr. Sewall's case a cure has been effected simply because the sugar disappeared from the urine?

The Blood in Diseases Commonly Designated "Of the Nervous System"

Dr. Joseph Collins and Dr. D. M. Kaplan, New York: There is no disease of the nervous system dependent on definite and unvarying disease of the blood. There are definite forms of secondary anemia that result from diseases of the nervous system, especially those due to toxic causes. There are definite blood conditions associated with perversion of function of some of the ductless glands, such as the thyroid. The alteration of the blood in anemias resulting from or coincident with certain chronic nervous diseases is not constant. The alteration may be in size, color, shape and distribution of the hemoglobin in the various cells, or in additions to the cells, such as granules. The white cells do not carry the burden of chronic disease as much as the red ones, although often here, as in conditions in which much degeneration takes place, even the white cells begin to show a darker protoplasmic body than is usually encountered in normal cells. The changes in size in the red corpuscles are usually encountered in the small cell or in extraordinarily large ones. The changes in color vary from a very pale pink to that of the bright red, and may change in very much degenerated cells to a grayish green. The contour of the cell may change from round to a cell that can be hardly recognized as an entity, and it may present the changes from an oval and a crescent to mere fragments of a cell. The abnormal enclosure are usually the granules. In the white blood-corpuscles the changes are due to the influence of invasion by morphologic or toxic elements. The great predominance of uninuclear neutrophils direct the attention of the observer to an invasion by bacteria. In an acute disease, irrespective of the number of white blood-corpuscles per cubic millimeter, the white cells show a pronounced uninucleosis. Lead produces changes in the blood that are recognized even by the beginner. Of great importance in connection with the red cells are the granules that appear in lead poison and disappear with proper therapy. In this instance it is essential to know the number of cells affected and the degree of granulation; meaning thereby, coarse granulation or fine granulation. The more pronounced and overwhelming the affection the larger are the granules and the more numerous the cells affected by them. In proper therapy not only do the granules become smaller but the percentage of affected cells noticeably diminishes. It seems at present possible to regard patients who show a relative lymphocytosis with a preponderance of large lymphocytes and diminution or absence in the eosinophils as cases approaching the hyperthyroid type. On the other side blood-smears that present the lymphocytosis with a preponderance of the small lymphocytes and coexistent increase in the eosinophils as types of hypothyroidism. The latter blood findings were found in cases clinically diagnosed as colitis with mucus in the dejecta, bronchial asthma with eosinophils and mucus in the sputum and in endometritis and membranous dysmenorrhea with mucus and blood in the discharged membrane.

DISCUSSION

Dr. E. Libman, New York: I have watched for the last two years disturbed states of the blood in ductless gland diseases and believe they are much more common than has been hitherto believed. It is well known in certain conditions in which the pituitary has been displaced in some way or the ovary has been removed, there has been a lymphocytosis. I have made it a routine practice when I see a patient with general nervous symptoms to look for lymphocytosis, and if I find it I take the case out of the functional group. I think we make a mistake in looking always for thyroid disease. I think we should look for lymphemia.

Dr. F. C. Wood, New York: I have seen a number of cases of high eosinophilia. In one there was 58 per cent. of eosinophils.

Dr. W. B. James, New York: For a number of years I have been in the habit of recognizing a marked lymphocytosis as common in cases of neurasthenia; particularly where there appeared to be a sexual element in it. I have watched a number of these patients through to recovery without permanent impairment and have therefore satisfied myself that it is a transitory secretion, that this lymphocytosis is temporary, associated with a depleted state of health, with neurasthenic symptoms, usually with some disturbance of the sexual organs.

Dr. R. C. Cabot, Boston: I do not believe Dr. Collins meant to put it quite so strongly as he did about the relation of lead to the changes in the blood. Certainly we have the same changes in the blood without lead and we have lead without such characteristic changes in the blood. I suppose we all believe that this change in the blood is a valuable aid in the diagnosis of doubtful cases of lead poisoning, but we could not say that it had anything comparable at all to malaria parasites. Dr. Collins did not speak about an autopsy in the last case. Without that I do not think any of us would accept it as leukemia, or a new disease. This type of blood, such as pictured, is one of the variations around the leukocytosis and around the normal states which is familiar enough in a variety of conditions, but does not deserve to be placed as a new disease, or as leukemia.

Dr. Alfred Stengel, Philadelphia: In view of what I have observed in regard to lymphocytosis it would hardly be proper to attach very far-reaching deduction to the occurrence of that condition. My opinion agrees entirely with that of Dr. James.

Dr. Louis B. Wilson, Rochester, Minn.: The Kochers are at present going so far as to diagnose hyperthyroidism by lymphocytosis. We have made 800 examinations, and we find no evidence on which to base any such inference. We find lymphocytosis in a great many cases of syphilis, of liver disease, but in exophthalmic goiter, conversely, it is absent.

The Work of the Heart in Aortic Insufficiency

Dr. W. G. MacCallum, New York: By means of an arrangement of the circulation in which the aorta is replaced by a long rubber tube the outlet of which is placed at varying heights and empties into a reservoir from which the blood is reconducted into the aorta, the output of the aorta may be studied and compared with the output of the ventricle per beat of the heart. The heart thus acts against controllable pressure and is unaffected by vasomotors. When the tension of the vessel wall is low, there is a systolic fling which distinguishes such a pulse wave from that made in a vessel whose walls are under high tension. In the former there is a high pointed up-and-down curve before the dicrotic notch is reached—in the pulse of high tension there is not. In the first the notch is low, in the second high. No change could be produced in any given pulse wave by the escape of the systolic quantity of fluid which produced that wave upon its expulsion from the heart. The character of the wave in aortic insufficiency depends rather upon the lax condition of the wall which meets the systolic impact and which is due to the partial emptying of the vessel by regurgitation during the preceding diastole. If we subtract the actual output per beat from the aorta, from the calculated amount expelled by the ventricle per beat we find very little residual blood when the heart is intact. The amount is great after the production of aortic insufficiency. The ventricle relaxes very widely and contracts as completely. Its work is greatly increased by its being forced to receive and churn out into the aorta and back that quantity of blood which regurgitates in addition to its usual normal output.

Percussion Signs of Persistent and Enlarged Thymus

Dr. Thomas R. Boggs, *Baltimore:* This is recognized by medium percussion in the first and second interspaces to the left of manubrium, sometimes on both sides; rarely on right side alone. Differentiated from enlarged mediastinal glands by: (a) Superior and more superficial position. (b) Common position to left of manubrium. (c) By a special maneuver which depends on the movable character of the thymus and its attachments to the lower pole or poles of thyroid. (d) The maneuver. *Patient in sitting* posture, chin depressed. Outline lower border of thymus dulness. Then while pleximeter fingers are kept exactly in place, sharply retract head to fullest extent. Thymus dulness rises upward toward neck, leaving clear percussion resonance. Mediastinal adenitis, aneurysms and neoplasms do not give this shifting dulness.

Dr. A. Jacobi, New York: I always find that I can with great facility diagnosticate about the size of the thymus. A good many of them at birth weigh only a few grams, 10, 13 and 15. They are not easily recognized when the babies are sitting up or lying down, but they are recognized when the baby is bent over. I have been teaching this method for the last fifteen years.

The Effect of Some General Hydrotherapeutic Procedures on the Blood-Flow in the Arm

Drs. A. W. Hewlett, J. G. Van Zwaluwenburg and Mark Marshall, Ann Arbor, Mich.: Warm procedures increase the flow from two to ten times the original rate. Cold procedures usually lessen the flow, but the exercise and friction given in an ordinary cold shower may cause a moderate acceleration of the flow. The chief cause of the acceleration of blood-flow in an arm not directly exposed to the heat is a vasomotor reflex initiated by the stimulation of cutaneous sense organs, but the rise of body temperature accompanying hot procedures tends to prevent an excessive contraction of the peripheral vessels with chilling when the individual is exposed to cold. If the body temperature is subnormal an immediate reaction may follow cold procedures which are accompanied by friction and exercise, but the individual is liable to become chilly later. The chilliness which indicates a failure to react is accompanied by a slow rate of blood-flow in the arm. Reactions are usually but not necessarily accompanied by normal or moderately increased rates of flow.

Dr. S. Solis-Cohen, Philadelphia: My observations have shown that brief application of cold will raise the body temperature in febrile conditions.

A Case of Pseudochylous Ascites

Dr. F. P. Henry, Philadelphia: The patient was a man aged 60 but looking at least 70. His most prominent ailment was ascites. From the time of his admission until his death, a period of about four months, he was tapped eight times, six to eight quarts of milky fluid being removed at each tapping. After tapping, a mass could be felt in the abdomen a little above and to the right of the umbilicus. It was about the size of an egg, hard and not tender on pressure. At the autopsy this mass proved to be a non-obstructive carcinoma of the pyloric end of the stomach. There was no enlargement of lymp-glands or dilatation of lymphatic vessels. The liver parenchyma was quite normal. No obstruction of the portal vein was found, although the complete dissection of this vessel and of the bile-ducts was rendered impossible by the tumor mass. As the patient was never jaundiced it is certain that there was no destruction of bile-ducts and, probably, that there was none of the portal vein. The most remarkable property of pseudochylous effusions is their resistance to putrefaction. A sample of the effusion obtained on February 18 and kept in an ordinary living-room at a temperature of 65 to 70°, is now, May 10, perfectly "sweet," in fact as devoid of odor as the purest spring water. This property is undoubtedly due to lecithin as proved by the fact that where this substance is extracted from it the fluid rapidly putrefies.

Further Studies on Sensitization in Tuberculosis

Dr. V. C. Vaughan, Jr., Detroit, Mich.: Since May, 1909, thirty-nine persons have presented themselves for examination at the Tuberculosis Clinic who have failed to react to a primary *instillation of tuberculin* into the conjunctival sac but have reacted to a second instillation in the same eye after an interval of ten to twenty-one days; only two presented any signs or symptoms suggestive of pulmonary tuberculosis. This conclusion was arrived at after careful physical examination and accurate observations of temperature and pulse for a period of one week. Among thirty-three apparently uninfected children, or at least children free from manifestation of active disease, ten gave a reaction of sensitization, while among twenty-three children of tuberculous parents, or associated with tuberculous cases who failed to react primarily none subsequently developed a sensitized reaction.

DISCUSSION

DR. F. T. LORD, Boston: We have injected a number of healthy guinea-pigs intravenously and intraperitoneally with tuberculin and afterward applied the ophthalmic test, but with negative results, indicating that non-tuberculous pigs are not capable of reacting from the standpoint of sensitization.

DR. LAWRASON BROWN, Saranac Lake, N. Y.: Some experiments have been carried on in the Saranac laboratory to try to produce sensitization in animals by the inoculation of various things. It has been found impossible to produce sensitization to eye test and subcutaneous test in animals which have not received previously very large doses of dead tubercle bacilli or living tubercle bacilli, and I cannot but feel that the fact that tuberculin tests may be negative the first time and if repeated in the same place show a reaction, is due to the fact that the patient has had a tuberculous infection at some time. It may never have shown clinically. I do not believe you can sensitize an individual who has not been infected with tuberculosis.

Tricuspid Stenosis, with Report of Five Cases

DR. THOMAS B. FUTCHER, Baltimore: Mine was a case of tricuspid, aortic and mitral stenosis, with autopsy, in which the diagnosis was made during life. In the autopsy records of the Johns Hopkins Hospital there have been only four other cases of tricuspid stenosis out of a total of 3.500 autopsies. There have been only eight cases in the medical wards, out of a total of 26.000 admissions, in which a diagnosis of tricuspid stenosis was made either from the physical examination or autopsy findings. Positive diagnosis by autopsy was made in only five cases.

NEW HAMPSHIRE MEDICAL SOCIETY

The One Hundred and Twentieth Annual Meeting, held at Concord, May 11-12, 1911

Under the presidency of DR. A. S. WALLACE, Nashua

Officers Elected

The following officers were elected: President, Dr. George W. McGregor, Littleton; vice-president, Dr. John W. Staples, Franklin; secretary, Dr. D. E. Sullivan, Concord.

The next meeting will be held at Concord, May 8 and 9, 1912.

The report of the secretary showed the total membership to be 538. The society is in excellent financial condition, a balance of $4,556.75 being available. Five hundred dollars was placed at the disposal of the Committee on Legislation, for legitimate purposes before the next legislature and the county societies were advised to appoint auxiliary committees of legislation to cooperate with the committee of the state society.

Dr. I. A. Watson, chairman of the Committee on History of Medicine in the State, reported that 1,000 copies of the complete manuscript records of the society from 1791 to 1854 had been printed and were ready for distribution.

Child Welfare

DR. Z. L. STRAW, Manchester: I wish to make a strong plea for the welfare of the child from the standpoint of the physician as well as the state, medical science and educational science joining hands that the physical health and energy might be conserved and nourished and developed equally with the mental in the hope of a uniform and well-balanced result. The commingling of children from all families and conditions for long periods largely increases the danger of contagious and filth diseases and renders their management more difficult, and if the schools are to continue for all children they must be kept morally and physically clean and safe. The state compels the child to attend school, and it is thereby bound to take cognizance of its physical welfare. The school is the only governmental department that directly assumes control of children's lives. At least nine out of every ten of all American children are subject to this control. Such control is maintained for the most part during the critical years from seven to fourteen. The open air school is an outgrowth of the work for better medical supervision of scholars, especially such as from any cause are interrupted or retarded. Approximately 16 per cent. of all who drop out do so on account of ill health; it is wasteful to the state and inhuman to the child to curtail its opportunities for future usefulness. This work cannot be thoroughly done without the school nurse supplementing the work of the physician.

DISCUSSION

DR. CLARENCE O. COBURN, Manchester: The most important thing in the inspection is the vaccination which has been a state law for a number of years and has never until now been enforced in Manchester. Fully one-third had not been vaccinated. Eighty per cent. had decayed teeth. Several were discovered blind in one eye without knowing it. We keep a card system and examine pupils who need it weekly.

DR. D. M. CURRIER, Newport: I wish to plead for the introduction of instruction of sex hygiene in schools, lady physicians to teach girls. Ignorance is exceedingly dangerous. Knowledge of this subject would be a safeguard to them.

Tetanus Following Accidental Injuries

DR. M. E. KEEN, Manchester: In one case tetanus was anticipated but did not occur, in the other it did occur though not anticipated. A boy, trampled on by a horse, received eight compound fractures of the skull, four being comminuted. The usual treatment, 1,500 units of antitetanic serum, was given the next morning. There were never any symptoms of tetanus and only a few drops of pus at any time. Patient was discharged well in just one month from date of injury. A boy, aged thirteen, was injured in coasting by colliding with a post. He did not lose consciousness; walked home. Examination: marked pallor of entire body surface; no abrasion; no discoloration. Temperature, 98; pulse, 84. Complained of slight pain in left hypochondrium. Slight vomiting. Some dulness in left upper quadrant extending toward axillary line. Probable rupture of spleen diagnosed and operation advised. Examination disclosed multiple rupture of the spleen, the upper end reduced to a pulp and the external and internal surfaces were fissured from end to hilum. Lower portion of left lobe of liver badly torn. It was necessary to utilize the diaphragm to hold in apposition the numerous fragments of spleen. On the eleventh day tetanus developed, and 1,500 units of antitetanic serum were administered and 20 grains of chloral by rectum. Salt solution, per rectum, one pint per hour and continued two weeks. There were fifteen spasms in sixteen days, to control which 21,000 units antitetanic serum were used. The method of entrance of the germ of tetanus is not known in this case.

DISCUSSION

DR. W. H. LYONS, Manchester: It is remarkable how very great internal injuries there may be with very slight evidence of it. The most interesting point in connection with the second case was the occurrence of the tetanus following the internal injury with no external lesion, not even the smallest abrasion to be seen.

DR. W. A. THOMPSON, Manchester: I wish to draw attention in the first case to the possibility that later on, perhaps in ten years, there may be signs of epilepsy, and it is a question whether it is necessary to close in the defects by putting back the flap over the wound or whether it is advisable to close the defect by artificial means, such as where an external lesion of the skull can be put over to prevent adhesion to the brain and prevent hernia. Whether it is advisable for this boy to undergo that again is a question in my mind. In regard to the second case, I was greatly impressed with the difficulty of operating on the spleen in its sheltered position underneath the diaphragm. No doubt the boy owed his life to the early diagnosis made and the care taken of him.

Clinical Experiences With Serums and Vaccines

Dr. W. Gilman Thompson, New York City: While some of these preparations are now universally admitted to outrank all older therapeutic measures in potency and reliability, others are as yet in a purely experimental stage. Some have proved disappointing, and all present many unsolved problems as to details of technic. The wards of Bellevue and the Presbyterian Hospitals and the out-patient medical clinic of the Cornell Medical College afford abundant material for the study of these remedies. Flexner's anti-meningococcus serum is certainly miraculous in its curative effect in cerebrospinal meningitis of that origin and is injected at the same time the first tapping of the spinal canal is made. There are no untoward symptoms, even when used in a case due to the pneumococcus. The antitetanus and antirabic serums have also a fixed place in our therapy. The antityphoid vaccine is used successfully everywhere. The Hodenpyl anticarcinoma serum does not appear to have justified the hopes which were at first entertained of its effects. Tuberculin injections have proved strikingly beneficial. Colon bacillus vaccine in pyelitis gives very favorable results but does not remove the bacilli from the urine. Pneumococcus vaccine had no marked effect in ordinary cases but in a number of cases with retarded resolution there seemed to have been some moderate betterment. With modified technic it may sometime yield more beneficial results. In chronic gonorrheal joints infections antigonococcus serum and vaccine is very satisfactory. Three cases of streptococcal endocarditis in which the germ was derived from the patient's blood terminated in recovery. Stock vaccines gave uniformly negative results. The Rogers-Beebe exophthalmic goiter serums in an extensive experience have given many very remarkable results.

DISCUSSION

Dr. John G. W. Knowlton, Exeter: I am interested to know that Dr. Thompson feels pretty certain that the epidemics of meningitis are being affected by serum. That, of course, has had a good try-out for the last three years, and it is encouraging to feel that we have something to use in the treatment of meningitis. I believe in serum, and I tell my patients it is the thing to use in epidemic meningitis.

Rational Medical Treatment

Dr. E. A. Landman, Plaistow: The tendency of the day is to return to the simpler therapeutic methods and the few reliable drugs that have stood the test of time—to accept that only which can be proven and to discard that which is doubtful. As we grow older we become less and less disturbed by the new discoveries, unless they seem rational and in accord with known scientific facts. Is it not time that the physician of this new era of scientific therapeutics should reexamine his methods and subject them to the test of approved modern investigations? I criticize the too frequent use of the expensive trade-mark preparations, which are taken up with great enthusiasm only to be discarded on the introduction of newer ones; the day has gone by when one can bluff his way in practice. The general practitioner has no right to do major surgery when a skilful surgeon is available. The results of treating diphtheria by antitoxin and epidemic cerebrospinal meningitis by serum are striking instances of rational treatment. It is the height of folly to use vaccines as in pneumonia to stimulate an already over-stimulated system; when most needed they are useless, and when useful are not needed.

DISCUSSION

Dr. Henry L. Sweeney, Kingston: I believe it possible to obtain good results by the intelligent use of drugs and I have faith in them when needed, carefully chosen, rationally given and pushed to effect.

Dr. John W. Parsons, Portsmouth: Rational medical treatment is the use of reasonable, judicious treatment, based on theory or facts which we possess, although meager, concerning disease and its management, even if no positive or scientific explanation can be given for the action of the remedy.

Ophthalmia Neonatorum

Dr. Louis W. Flanders, Dover: Five minutes' attention at the critical moment will save seventy years of blindness. Credé's method is now followed in practically all public institutions, but not in private practice to the extent that it should be. All physicians should employ it as a routine practice in obstetrics. Our last legislature passed a fairly stringent law relative to this disease. Every obstetric bag should contain one-half dozen soft gauze sponges and one dark amber Stearns dropper-bottle, filled with a 1 per cent. solution of nitrate of silver. Successful treatment demands skilled nursing and perfect technic—no condition in which the services of a trained nurse are more to be desired. The eyes must be cleaned of pus every hour, day and night; the warm boric acid solution is probably as good as any for this purpose. Every two hours let the nurse instill two drops of a 25 per cent. solution of argyrol freshly prepared, and once a day let the physician thoroughly apply to the everted lids a solution of nitrate of silver not stronger than 2 per cent. Allow the solution to stay on thirty seconds, then swab with normal salt solution. If you got a gonorrheal infection in an eye and the sight is lost where you did not use prophylactic treatment, public sentiment would hold you responsible and in a suit for malpractice, it would go hard with you.

DISCUSSION

Dr. Charles F. Nutter, Nashua: The non-gonorrheal cases are worthy of attention, as it is not necessary for the mother to have gonorrhea and the infant extremely sore eyes. The infection may come from the hands of the attendant. The nurse should be instructed to report to the attending physician the very first evidence of congestion.

Dr. D. M. Currier, Newport: A certificate of health should be demanded of those about to marry. There should be a law in this state requiring every physician treating a venereal disease to report it to the board of health.

Anal Fissure

Dr. Charles S. Gilman, Boston: In sixty-eight cases referred by other physicians as hemorrhoids, anal fissure was found to be the primary disease for which relief was sought; in twelve cases hemorrhoids were present as a coexisting condition. In forty-six cases the physician had neglected to examine the parts. There is probably no pathologic condition so limited in extent which causes so much discomfort and distress; in most cases a single ulcer is present. It is more common in men—not rare in young children. Anything which weakens the anal tissues, thus rendering them liable to abrasions, will act as a predisposing cause while the passage of hardened fecal masses with or without foreign bodies in them is nearly always the exciting cause. The pathologic changes vary from a very slight abrasion to quite extensive ulceration. The chief and constant symptom is pain, always increased by defecation, thus encouraging constipation; in women often reflex irritation of the bladder, tenesmus and uterine disturbance. The earliest symptom may be a morning diarrhea. A thrombotic hemorrhoid often develops as a result of straining. Palliative treatment of little value. Operative treatment by incision and excision. Forcible dilatation of the sphincter may be followed with incontinence of feces; also an oblique incision of the muscle may cause this unpleasant complication.

DISCUSSION

Dr. C. S. Abbott, Laconia: The lesson to be learned by the general practitioner from this paper is greater care and more frequent examinations of these patients.

Dr. W. E. Lawrence, North Haverhill: I wish to report a case with symptoms of appendicitis. Operation gave no relief. Later fissure of the anus was discovered, incised, and the previous symptoms disappeared. There is always indigestion in these cases.

Drinking-Water as a Medium of Lead-Poisoning

Dr. George A. Weaver, Warren: I wish to report eight cases in which the symptoms did not, as a rule, appear until the water had been used about six months. Children were afflicted less often than adults and women were much more susceptible than men. It is more frequent in rural communities in this state than malaria, syphilis and alcoholism combined. In thirty samples of water from lead-conducted sources examined at the state laboratory all but one showed a considerable percentage of lead. Acute poisoning is rare. No symptoms are constantly present that may be considered pathognomonic. One group will show a predominance of gastro-intestinal symptoms; another interstitial nephritis and associated arteriosclerosis; a third may present sclerosis of the brain and cord; a fourth, multiple arthritis. In the case of a child, three years old, vomiting blood and having bloody stools, rectal feedings were resorted to for one week with complete recovery. In another case, a woman aged 30, the menstrual flow was scanty and finally stopped altogether; on discontinuing the water-supply, the color improved and menstruation became normal after six months suppression. Several patients when first seen were comatose; no motor paralysis; relieved by venesection and purging. In one instance there was complete hemiplegia; the patient recovered under appropriate treatment. In any obscure case in which the drinking-water runs through lead pipes, examine the water for lead.

Injury of Scalp

Dr. William E. Lawrence, North Haverhill: A young lady was thrown from an automobile, dragged beneath the machinery and a portion of the scalp, 6¾ by 7¾ inches, was torn from the top of her head. It was placed in normal salt solution after thorough cleansing, hair shaved and edges trimmed and sewed on, using a continuous suture, gauze dressing applied. On the third day, the center seemed dead and was dissected off, about one-third of the piece, and the wound dressed with a solution of chlorinated soda, 1 dram to the pint. At the end of one week only a strip of tissue, one-half inch wide, extending half way round the scalp, was left. The cranial bones were kept covered with petrolatum and the scalp dressed with compresses of normal salt solution. Granulations appeared, and by the fifth week covered the greater part of the vault; skin grafting was then commenced (Thiersch's method) and continued every other day for eight weeks. The new granulation tissue is firmly attached to the cranium and is quite immovable. There are no sweat or oil glands and this need must be artificially supplied.

The Treatment of Medical Subjects by the Lay Press

Dr. Henry O. Smith, Hudson: The schools and the press have most to do with education. The monthly magazines, the metropolitan press and the local newspaper influence greatly the minds of their readers. How important then that the medical articles in the lay press be safe and sane in character? The *Youth's Companion* for many years has printed commendable articles on hygiene and medical subjects. *Life* and the *Cosmopolitan Magazine* pursue a far different course. We still read of sure cures for consumption—of soothing oils for cancer and unfailing remedies for conditions which shall be nameless. The public has a right to demand that the news columns shall be free from such misleading material. Intelligent people outside of the profession are realizing the need of work along these lines. Recently the president of the University of Minnesota exclaimed, "Would that Mr. Carnegie's next gift of $10,000,000 might be devoted to publishing in newspapers authoritative bulletins on hygiene and sanitation."

Dr. Eva M. Locke, Nashua: There is a large class of people who are influenced by the advertisements of patent medicines to their own injury, sometimes irreparable. Cannot attractive articles be put before the public giving them accurate and valuable knowledge on diet, sex hygiene and sanitation? Let these appear in the press, in leaflets and in the fiction of the day. The text-books in the public schools on physiology should be carefully scrutinized. The women's clubs are doing a grand work in these matters.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

Old Dominion Journal of Medicine and Surgery, Richmond, Va.

May

1 Personal Experience with Salvarsan. J. T. Geraghty and A. Keidel, Baltimore.
2 Cholecystitis: Its Complications and Sequelæ. A. M. Willis, Richmond.
3 *Diagnostic Value of Reflexes. A. Gordon, Philadelphia.

3. **Diagnostic Value of Reflexes.**—The diagnostic value of only such reflexes as the general practitioner can elucidate and estimate is discussed by Gordon. He says that apart from Babinski's sign and the paradoxical reflex, a certain apparently abnormal condition of any of the other reflexes by itself does not necessarily imply an organic disease of the nervous system. For example, an increased or diminished knee-jerk alone will not determine the diagnosis. A patient free from all other possible symptoms has no tabes, if there is only a markedly diminished knee-jerk or even absence of it. It is true that in 99 per cent. of normal cases the knee-jerk is never absent; nevertheless, Gordon has observed individuals in whom the knee-jerk could not be elicited even with Jendrassik's method. A much diminished knee-jerk in normal persons is not so rare as absence of it. However, such cases should be looked on with suspicion and thoroughly investigated. The same remarks are applicable to exaggerated knee-jerks. As a rule, such a reflex is the clinical expression of an involvement of the motor pathway in the brain or spinal cord. Nevertheless increased patellar tendon reflex is observed in normal individuals whose nervous systems are at the time of the examination in a state of tension; also in hysteria and neurasthenia. In hysterical hemiplegia the exaggerated knee-jerk may lead to errors of diagnosis and an incurable organic disease instead of a curable functional affection may be made out.

One symptom alone, therefore, is not reliable enough, no matter how evident it may be. In this latter case, for example, it will be essential to determine whether the palsy, gait, attitude, the state of tonicity of the musculature, etc., are those observed in genuine paralysis of cerebral origin; besides the presence or absence of other reflexes, such as Babinski and paradoxical. It is the association of symptoms that determines a diagnosis, but not one particular phenomenon. On the other hand, in the presence of manifestations which are apparently contradictory and difficult of interpretation, the presence of an exaggerated knee-jerk and of a much diminished knee-jerk or else of absent reflex will render considerable assistance in the determination of a given affection. Ankle-clonus in association with a plus knee-jerk is a good indication of an involvement of motor tract and therefore of an organic disease. It must not be forgotten, that to be a sign of organic disease, ankle-clonus must be prolonged, but not brief, as it is seen in hysteria or other functional disturbances of the nervous system. The exceptions to this rule are very few. If the condition of the knee-jerk and ankle-clonus present sometimes difficulty of interpretation, the same cannot at all be said with reference to Babinski's sign and the paradoxical reflex. They are always and invariably indications of an organic disease of the spinal cord or brain. Finally the state of pupillary reflexes is of great diagnostic importance inasmuch as they may lead to the proper diagnosis and therefore to proper therapeutic measures, when other symptoms are so slight that a diagnosis can be made with great hesitation.

Southern Medical Journal, Nashville, Tenn.

May

4 Increase of Insanity. J. T. Searcy, Tuscaloosa, Ala.
5 Influence of Uncinariasis on the Apparent Age of Children in the Cotton Mills. C. W. Stiles, U. S. P. H. and M.-H. Service.
6 Effects of Some Diseases, Habits and Heredity on Longevity. L. Sexton, New Orleans.
7 Surgery Outside of the Hospital. J. W. Alsobrook, Plant City, Fla.

8 Results with Gonococcic Vaccine. G. R. Livermore, Memphis, Tenn.
9 Five Hundred Cases of Gonorrheal Infection Treated with Gonococcic Vaccine. C. W. Shropshire, Birmingham, Ala.
10 *Treatment of Trachoma. H. H. Martin, Savannah, Ga.
11 Surgery of the Tonsils. H. Wood, Nashville, Tenn.
12 *Scientific Infant Feeding. M. O. Davis, Nashville, Tenn.
13 Case of Elephantiasis Caused by the Streptococcus Erysipelatus, Associated with the Bacillus Prodigiosus. W. M. McCabe, Nashville, Tenn.

10. Abstracted in THE JOURNAL, Nov. 26, 1910, p. 1920.

12. Abstracted in THE JOURNAL, Dec. 3, 1910, p. 2006.

Journal of the Tennessee State Medical Association, Nashville

May

14 *The Physician in Public. J. A. Witherspoon, Nashville.

14. Abstracted in THE JOURNAL, May 6, 1911, p. 1354.

New Orleans Medical and Surgical Journal

June

15 Diagnosis and Treatment of Diseases of the Mitral Valve. F. M. Thornhill, Arcadia, La.
16 Intermittent Claudication (Painful Spasmodic Limp). E. M. Hummel, New Orleans.
17 *Extradural Injections by Sacral Puncture in Genito-Urinary Neuroses. S. P. Delaup, New Orleans.
18 *Case of Tuberculous Meningitis with a Remarkable Ante-Mortem Rise of Temperature. H. D. King, New Orleans.
19 Thoracoplasty by Schede's Method. W. M. Perkins, New Orleans.
20 The Roentgen Ray in the Diagnosis and Prognosis of Pulmonary Tuberculosis. A. Henriques, New Orleans.
21 Prevention of Typhoid. W. F. Sibley, Robeline, La.

17. **Sacral Puncture in Genito-Urinary Disease.**—Delaup has done a sacral puncture and injection in seven cases. Only one patient was not benefited in any way. The author's experience has convinced him that extradural injections with normal salt solution, or any mild analgesic solution, offer the most promising results in abnormalities of urination due to faulty vesical innervation. Incontinence of urine, enuresis, excessive frequency of urination (unless due to other pathologic conditions), can at least be ameliorated, if not cured, by extradural injections. The immediate effects of extradural injections are very rarely even disagreeable, and, when cautiously performed, the injections are in no wise dangerous to the patient, and no more painful than any other hypodermatic injection with a mild solution.

18. **Tuberculous Meningitis.**—Aside from the difficulty encountered in making a diagnosis, the most interesting feature of King's case was the accompanying temperature. The caprices exhibited by the temperature were puzzling and inexplicable. At times there would be distinct remissions, only to be followed by a spurt upward, and then a sudden downward plunge. Often the temperature oscillations were as much as 2 degrees within as many hours; one morning the temperature would be very high, and the evening temperature low. The next day conditions would be entirely reversed. The day following the withdrawal of spinal fluid the temperature dropped nearly to normal, only to rise very high the next day. The pulse was not always commensurate with the febrile reaction. On the fourteenth day of illness, the temperature began to maintain a more definite course, the ascensions and declinations were not as freaky. The temperature on the fifteenth day reached 105.2 F., with a pulse of 110 and respiration 46. Within the next two hours there was a decline of two degrees, though the pulse-rate was increased to 128 and respiration had dropped to 36. For five hours temperature (103 F.), pulse (128) and respiration (36) remained unchanged, and then within the short interval of three hours the temperature leaped to 106.5 F., pulse 140, respiration 48. This sudden change was noted at 6 a. m. and three hours later the temperature was 107 F., pulse 145, respiration 60. From this hour the temperature kept mounting higher. To avoid the chances of error in observation, several thermometers were used, all with the same result. At 1 p. m. the temperature was 107.8 F., pulse 170, respiration 76, and at 5 p. m. the temperature had reached 110.8 F. Forty minutes after this record the patient expired. A complicating terminal pneumonia hastened the end.

Journal of the Missouri State Medical Association, St. Louis

May

22 The Hodgen Suspension Splint: A Reliable Apparatus in Fractures of the Femur. N. W. Sharpe, St. Louis.
23 Cheilitis Glandularis Apostematosa with Associated Cheilitis Exfoliativa. R. L. Sutton, Kansas City.
24 Complete Traumatic Aniridia, with Injury to the Lens: Recovery with Useful Vision. J. Green, St. Louis.
25 Six Hundred Cases of Fracture of the Skull. E. A. Babler, St. Louis.
26 Pellagra. A. J. Vance, Harrison, Ark.
27 A Case of Nasal Polypi. R. S. Magee, Topeka, Kan.

American Journal of the Medical Sciences, Philadelphia

June

28 *Myoma of the Uterus, with Special Reference to Degenerative Changes. J. B. Deaver and D. B. Pfeiffer, Philadelphia.
29 *Cerebral Forms of Poliomyelitis and Their Diagnosis from Forms of Meningitis. H. Koplik, New York.
30 *Abscess of the Liver Occurring in Association with or Following Typhoid. E. M. von Eberts, Montreal.
31 *Irregularity of the Heart and Auricular Fibrillation. A. R. Cushny, London, England.
32 *Perforated Ulcer of the Stomach and Duodenum. G. G. Ross, Philadelphia.
33 *The Cellular Elements of the Blood in Tuberculosis. B. L. Wright and R. W. King, Las Animas, Colo.
34 *Relaxation of the Sacro-Iliac Joints as a Cause of Sciatica and Backache. R. L. Pitfield, Philadelphia.
35 Pneumococcus Peritonitis. G. Woolsey.
36 Freud's Psychology in Its Relation to the Neuroses. T. Burrow, Baltimore.
37 *Fluoroscopy of the Gastro-Intestinal Tract. E. H. Skinner, Kansas City, Mo.

28. **Myoma of the Uterus.**—Hyaline degeneration was noted as present in a marked degree in thirty-seven cases, or about 11 per cent. of 345 cases operated by Deaver and Pfeiffer. This does not represent the true incidence of the condition, since early hyaline change was not specially noted. They found nine instances of myxomatous change and three pronouncedly cystic, twelve in all (3.6 per cent.). Necrosis occurred twelve times, or 3.6 per cent. Calcareous degeneration occurred eight times (2.4 per cent.). Adding together all noteworthy benign degenerations occurring in this series there is a total of thirty, or 9.6 per cent. This is not to be interpreted to mean that approximately 10 per cent. of all fibroids will show such degenerative changes, but that of a series of cases which are considered under present standards to require operation, about 10 per cent. are causing trouble largely as a result of degenerative changes which have occurred in them. Four cases, 1.2 per cent., were diagnosticated pathologically as sarcoma. There were eleven instances of carcinoma associated with myoma (3.1 per cent.). Of these, six (1.7 per cent.) involved the body, and five (1.4 per cent) were situated in the cervix.

29. **Cerebral Forms of Poliomyelitis.**—The condition described by Koplik is one which he says is constantly mistaken for meningitis of the cerebrospinal acute suppurative or subacute tuberculous form. The onset of the illness is acute; it begins with a previous history of absolute health. After the acute symptoms set in, there may be in some cases an abatement and then a recurrence of symptoms of a cerebral nature, which gradually deepen. If the case is one resembling an acute meningitis, the symptoms are more active, with neck rigidity, pain in the neck, headache and delirium. If the case resembles the tuberculous form of meningitis, the patient lies more quiet, exhibits palsies of the cranial nerves and may even have marked hydrocephalus with distinct Cheyne-Stokes respiration and unconsciousness. In both sets of cases the delirium, sopor or coma lightens, the patients after a week or more of illness becoming brighter, and recovery proceeds. Lumbar puncture in all the cases reveals a clear or slightly flocculent fluid, without bacteria, and a cytology of 90 per cent. to 100 per cent. lymphocytes. An examination of the blood shows a leukocytosis at first of pronounced degree of polynuclear type. The onset of the disease may be ushered in by fever, which rapidly subsides to within a fraction of a degree of the normal and the major part of the illness runs its course with this temperature, which is practically normal. The diagnosis is made from the points of clinical course laid down in this paper. The prognosis is for the most part good, except in those cases which involve the nuclei of the nerves controlling respiration. In such cases the outlook is that of an acute bulbar paralysis when the extent of the lesion will

decide the fate of the case. The main point is to have in mind the great similarity of a certain set of these cases to those of tuberculous meningitis, and the absolute futility of a positive diagnosis without study of the case, lumbar puncture and all the clinical aids at our command.

30. **Abscess of the Liver and Typhoid.**—The thirty cases studied by von Eberts are divided into two groups, the first including those in which the presence of the *B. typhosus* as an etiologic factor was confirmed by bacteriologic examination; the second, those cases in which abscess occurred in association with or following typhoid infection, but in which the *B. typhosus* was not isolated. He concludes, as the result of his study, that abscess of the liver occurring as a complication or sequel of typhoid may arise independently of typhoid lesions of the gall-bladder or ducts, pylephlebitis, or the presence of suppuration elsewhere in the body. The recognition of solitary abscess is important because of the fact that only such cases are suitable for surgical treatment. Age and sex have no bearing on the incidence of liver abscess apart from their relation to typhoid generally. As predisposing factors, the virulence of the primary infection, traumatism, and pre-existing disease would appear to have been established. The frequency of liver abscess in relation to typhoid reported from hot climates may be accounted for (a) by the high incidence of typhoid infection in European drafts, and (b) by the pre-existence or occurrence during convalescence of amebic infection. The onset of the symptoms of liver abscess may occur early in the course of the primary infection, after a fever-free interval of days or weeks, or as a remote sequel.

The relation of typhoid carriers to the last class is a subject for further investigation. Of the symptoms of enlargement of the liver, fever, local pain and tenderness are the most characteristic. Jaundice is present in about 15 per cent. of the cases only. In about 50 per cent. of the cases the focus of suppuration is located in the right hepatic lobe. The occurrence of chills is apparently without relation to the organism or organisms found in the local lesion. There would appear to be ground for the assumption that foci of suppuration in the liver due to the *B. typhosus* may occasionally undergo spontaneous resolution. Pleuritis, either serous or purulent, not infrequently occurs as an associated complication. The only safe method of treatment is by incision and drainage, the route selected, either abdominal or transpleural, depending on the location of the abscess. Preliminary transperitoneal puncture should not be practiced owing to the danger of leakage and peritonitis. In future observations on such cases, von Eberts urges that the scope of bacteriologic investigations should include the use of media especially suitable for the cultivation of *B. typhosus*, as well as careful search for *amebæ*.

31. **Irregularity of the Heart.**—As regards the treatment of this condition, Cushny says that no disease of the heart responds so satisfactorily to digitalis and its allies as auricular fibrillation. But not all cases of fibrillation react thus brilliantly to digitalis; the slow irregular heart in which fibrillation is accompanied by impaired conduction is comparatively little improved. The condition which responds to digitalis most readily and satisfactorily is the rapid irregular heart of old rheumatic disease, in which fibrillation is present along with good conductivity through the bundle of His and a readily responding ventricle. Here digitalis reduces the pulse-rate rapidly from 120 to 150 to 60 to 70, and as the pulse falls the whole of the symptoms improve. If the drug be pushed the pulse continues to fall and may reach 40 to 50. Beyond this, digitalis generally induces other symptoms from the gastro-intestinal tract so that its dose has to be reduced. If it is abandoned altogether the previous condition soon returns, often in a less marked degree, and it is advisable to continue the treatment for several months. Digitalis does not arrest the fibrillation of the auricle, but it certainly reduces the number of impulses which reach the ventricle and thus lessens the rate of that chamber.

Cushny is not convinced that this reduction of rate, which is undoubtedly mainly inhibitory in nature, is the only effect of digitalis, though it is the only one which can be ascertained with certainty at present, and undoubtedly plays an important rôle in the action. When digitalis is administered in auricular fibrillation and the pulse is slowed, the rhythm becomes more regular and the beats more equal in strength, though complete regularity is not attained unless complete block is induced. If the drug is pushed, a curious new form of irregularity often presents itself in coupled beats or continued bigeminus in which each beat of the ventricle that arises in the normal way from an auricular impulse is followed by a contraction arising from the ventricle itself. In connection with the treatment of fibrillation with digitalis, Cushny calls attention to the fact that an attack of this condition may in certain circumstances be precipitated by this drug.

32. **Perforated Ulcer of Stomach and Duodenum.**—In the first of Ross' four cases the second perforation had occurred ¾ of an inch from the first one, and when the duodenum was opened, it was discovered that both perforations had occurred in the same ulcer, which was horseshoe-shaped, corresponding to the curve of the duodenum. In the second case, five months after the date of operation a piece of gauze 1 inch wide by 5 inches long was passed through a suprapubic sinus, which had persisted since the removal of the glass drainage tube. It was a *piece of gauze of the tube* dressing which had been cut thin at one place and had become separated, and at the next dressing had been pushed through the tube and left there when the tube was withdrawn. The third case illustrates several important aspects of peptic ulcer: (1) The combined peptic ulcer of the stomach and duodenum; and (2) a primary perforation of a gastric ulcer and a subsequent perforation of a duodenal ulcer. Here again the value of a gastro-enterostomy presents itself. The fourth case did not present any special points of interest, except a difficulty in diagnosis.

33. **The Blood in Tuberculosis.**—Wright and King found that in uncomplicated cases of tuberculosis the average number of red cells is normal or above, excepting during a short time prior to death. The hemoglobin percentage averages about 85 per cent. excepting during a short time prior to death. The red cells exhibit an increased resistance to the hemolytic action of salt solutions, this resistance, as a rule, being increased directly as the progress of the disease. Resistance to hemolysis will probably be found of diagnostic value. The prognosis becomes less and less favorable as the hemolytic index falls. The hemolytic index and the lymphocyte percentage bear a direct relationship in prognosis. The total white count increases directly as the disease progresses. In most instances the stage of the disease, in uncomplicated cases, can be more or less accurately determined by the total white count. The polymorphonuclear neutrophils have but little if any phagocytic action in this disease. A high polymorphonuclear percentage makes a bad prognosis. It is strongly probable that the lymphocytes are markedly phagocytic in tuberculosis. A high percentage of lymphocytes is a very favorable prognostic index. The authors claim that the following blood findings are positive proof of improvement in any given case: (a) Decreasing white count; (b) falling polymorphonuclear percentage; (c) rising hemolytic index; (d) rising lymphocyte percentage.

34. **Relaxation of the Sacro-Iliac Joints.**—Pitfield reports eight cases of this kind where the patients were relieved by postures, exercises and fixative apparatus, consisting of a specially constructed leather belt. He points out that these cases illustrate the futility of treating at least a portion of sciatica cases with drugs or any other measures save orthopedic ones. Having seen within two years twenty such cases in general practice and in hospitals, Pitfield believes that true neuritis or neuralgia (idiopathic) of the sciatic nerve is a rare clinical entity. It may be due to reflex causes, such as constipation, pelvic tumors, etc., but he finds it hard to believe that actual degeneration of the sciatic nerve is a common thing.

37. Abstracted in THE JOURNAL, Oct. 29, 1910, p. 1582.

Journal of the Indiana State Medical Association, Fort Wayne

May

38 Arteriosclerosis. H. R. Lowder, Bloomfield.
39 *Bacteriology, Pathology and Diagnosis of Typhoid. W. Shimer, Fort Wayne.
40 Probable Direction of the Progress of Gynecology in the Immediate Future. B. C. Hirst, Philadelphia.
41 *Differential Diagnosis of Labyrinthine Suppuration and Cerebellar Abscess. J. J. Kyle, Indianapolis.
42 Endotheliomatous Cyst of the Omentum. M. A. Austin, Anderson.
43 *Hygiene of Menstruation. J. M. Ketcham, Indianapolis.
44 Treatment of Club-Feet. J. L. Porter, Chicago.

39, 41 and 43. Abstracted in The Journal, Nov. 26, 1910, pp. 1924, 1927 and 1928.

Washington Medical Annals, Washington, D. C.

May

45 Results of Treatment at the Starmont (Tuberculosis) Sanatorium. G. M. Sternberg, U. S. Army.
46 Case of Cyst of Appendix. G. T. Vaughan, Washington, D. C.
47 Premature Separation of Placenta. A. L. Stavely, Washington, D. C.

Boston Medical and Surgical Journal

June 1

48 *Acute Inflammation of Long Bones, with Special Reference to Excision of the Diaphysis. R. G. LeConte, Philadelphia.
49 Action of Salvarsan on the Wassermann Reaction. H. Fox, New York.
50 Early Diagnosis of Pulmonary Tuberculosis from the Standpoint of Physical and Fluoroscopic Examinations. J. A. Honeij, Boston.
51 Neurology of Apraxia. G. V. N. Dearborn, Cambridge, Mass.
52 Accurate Optics. I. Hartshorne, Poughkeepsie, N. Y.

48. **Acute Inflammation of Long Bones.**—Sixty cases form the basis of LeConte's study. His findings are summarized as follows: The mortality and the extent of the necrosis following acute inflammation of bone depends not only on the promptness of surgical interference, but also on its thoroughness. Suppuration beneath the periosteum does not exclude an infection of the medulla, the presumption being that after three days the medullary cavity is also involved. Within seventy-two hours of the onset of the disease osteoperiostitis is localized usually in the cortex of the bone, and incision, disinfection and drainage are sufficient to bring about a cure. If there is no marked diminution of the symptoms in twenty-four hours after incision and drainage, the medullary cavity should be opened. When the medullary cavity is opened and found healthy, the dangers from infecting it are slight. In the majority of Le Conte's cases osteomyelitis was due to a neglected osteoperiostitis. In operations after the third day, where systemic symptoms are pronounced, the medullary cavity should always be opened and the opening should be sufficiently long to expose healthy marrow, and sufficiently broad and long to expose healthy bone. The mortality of 10 per cent. was directly due to delay in operations, and to inefficient surgery at the primary operation. In five of these cases Le Conte says the surgery was at fault, and had a radical operation been done he believes that all of the patients would have recovered. In one case the delay in operation was perhaps more responsible than the surgery for its fatal termination. It is but fair to say, he continues, that in collecting these sixty cases, perhaps forty more were rejected for various reasons, none of which terminated fatally, so that a mortality of 6 per cent. is nearer the truth.

Cleveland Medical Journal

May

53 Measurement of the Rate of Flow of Blood in Man. G. N. Stewart, Cleveland.
54 Gynecologic Problems of Interest to the General Physician. B. C. Hirst, Philadelphia.
55 Common Fractures and Results of Treatment. F. J. Cotton, Boston.
56 Relation of Liver to Diabetes. J. J. R. Macleod, Cleveland.
57 Drug Exanthemata in Relation to Anaphylaxis. H. N. Cole, Cleveland.
58 Case of Icterus Gravis Following Confinement at Term. H. J. Lee, Cleveland.

Journal of Experimental Medicine, Lancaster, Pa.

June

59 *Adenomata Originating from the Islands of Langerhans. R. L. Cecil, New York.
60 Relation of the Reactive Stroma Formation to the Transplantability of the Cancers of the White Rat. I. Levin, New York.
61 The Micrograph. A. C. Crehore and F. S. Meara, New York.
62 *An Experimental Study of the Question of Aspiration of Foreign Material Into the Air Passages During Intratracheal Insufflation. T. S. Githens and S. J. Meltzer, New York.
63 *Action of Salvarsan on the Irritability of Nerve and Muscle. D. R. Joseph, New York.
64 *Bacteriology of Sputum in Common Non-Tuberculous Infections of the Upper and Lower Respiratory Tracts, with Special Reference to Lobar and Bronchopneumonia. T. W. Hastings and W. L. Niles, New York.
65 Resistance of the End-Piece and Mid-Piece of Complement Inactivated by Distilled Water. H. K. Marks, New York.

59. **Adenomata Originating from Islands of Langerhans.**—Cecil records a third tumor of the pancreas of the type reported by Nicholls and by Helmholtz. It occurred in the pancreas of a man sixty-three years old. For a year previous to his admission he had not been in good health. He was suffering from pain in the right lower quadrant of the abdomen, constipation, anorexia, loss of weight and some edema of the feet and ankles. The heart and lungs were normal; the abdomen soft and symmetrical. To the right of the umbilicus a mass 2 by 3 inches could be felt, somewhat tender and fixed to surrounding parts. The skin over the tumor was freely movable. The patient lost ground rapidly. On November 1 he passed about 10 ounces of blood per rectum. The urine contained no albumin or sugar. The patient died November 7. At the autopsy, there was found a large tumor, in the ascending colon, which extended up to the hepatic flexure. It was annular in shape. The outer surface was smooth and hard; the inner surface was papillomatous, with large necrotic ulcerated areas and covered with mucus. The lymph-glands in the mesocolon were not enlarged. Microscopic sections from the tumor showed it to be an adenocarcinoma. The pancreas was firm and pale. The pancreatic ducts were patent. At one point in the caudal portion, near the surface, but completely surrounded by pancreatic tissue, there was a small spherical tumor, the size of a French pea. On section, the cut surface measured 4 by 3.5 millimeters. The tumor was well circumscribed and enclosed by a delicate capsule within which it was freely movable. Cecil believes it is safe to conclude that the tumor developed from islands of Langerhans. Small encapsulated tumors of the size of peas, or even smaller, are occasionally found in the pancreas. These tumors are benign, and have a structure similar in all respects to that of an hypertrophied island of Langerhans. The distinctions between adenomata and forms of regenerative hypertrophy, sometimes so difficult to make in the breast, prostate, liver and other organs, is not easily drawn in the present case. The fact that one may encounter all gradations in the size of islands, from that of the normal island to that of the tumors, suggests that it is more reasonable to consider such tumors merely as hypertrophied islands rather than as adenomata originating from islands.

62. **Aspiration of Foreign Material Into the Air Passages.**—The authors' experiments seem to justify the conclusions that intratracheal insufflation protects the respiratory tract very efficiently against any invasion from the pharynx. The filling up of the pharynx with extraneous material, whether it be from the stomach or from the mouth, brings no danger to the trachea and bronchi. This holds true even if the animal is under deep anesthesia. On the other hand, the presence of a tube in the trachea or larynx without the protection of an effective current air stream, definitely facilitates the entrance of foreign material from the pharynx into the trachea. Anesthesia, which removes the protective action of deglutition, greatly increases the danger from aspiration in these cases.

63. **Action of Salvarsan on Nerve and Muscle.**—Joseph's experiments show that salvarsan is a comparatively inactive drug when applied directly to nerve and muscle tissue of the frog. In perfusion experiments with alkaline solutions, no detrimental action whatever was to be seen either on direct or indirect irritability. In bathing experiments, in which the concentration of salvarsan in the various solutions was surely much higher than that in which it reaches the peripheral tissues in the human subject through the circulation, the loss of irritability occurred only after a long period of exposure to the drug.

64. **Bacteriology of Sputum in the Respiratory Tract.**—In their examinations the authors found only 38 per cent. of the infections of the respiratory tract below the glottis pure, and this percentage was reached only by carefully following Kitasato's method of handling sputa. They believe that lobar pneumonia may produce sputum free from pneumococci, and may undoubtedly be caused by organisms other than the pneumococcus. There is found a marked yearly variation in the organisms which excite inflammation of the respiratory tract. *M. catarrhalis* is usually considered a common secondary invader; but it may, and probably frequently does, assume pathogenic properties.

Western Medical Review, Omaha, Neb.

May

66 Tendon Transplantation and Tendon Separation for the Reduction of Congenital and Acquired Deformities. F. Borglum, Lincoln, Neb.
67 Local Versus Diffuse Peritonitis. C. Lieber, Omaha, Neb.
68 Pathologic Basis of Uterine Hemorrhage. P. Findley, Omaha, Neb.
69 Clinical Aspect of Uterine Hemorrhage. W. O. Henry, Omaha, Neb.
70 Lactic Acid and Milk. C. W. Melick, Lincoln, Neb.

Journal of Cutaneous Diseases, New York

June

71 *Epithelioma of the Upper Lip in a Pure Negro. H. H. Kerr and H. H. Hazen, Washington, D. C.
72 A Comparative Study of Dermatitis Repens and Acrodermatitis Perstans. R. L. Sutton, Kansas City, Mo.
73 A Case of Lichen Planus Bullosus. J. W. Miller, Cincinnati.
74 *Eosinophilia in Scabies. J. A. Kolmer, Philadelphia.

71. **Epithelioma of the Upper Lip in a Pure Negro.**—In a rather careful search through the literature at the Surgeon-General's Library, the authors have been unable to find the record of any case of epithelioma of the upper lip occurring in a pure negro. The entire left side of the upper lip and the outer third of the left side of the lower lip were involved. There were two deep ulcers, one at the middle of the upper lip, and one at the corner of the lower lip. The two were connected by a mass of fungoid, sloughing tissue. The bases of the ulcers were sloughing and dirty. The inner edge of the fungus mass, where it was invading the face, was stony hard and deep seated. The whole inner surface of the upper lip was involved as far as the gums. The muscles of the cheek were slightly invaded. The submental and submaxillary glands were much enlarged. A portion of the hypertrophic tissue was removed for diagnosis. Sections showed typical epithelioma; the cells were of the squamous type, and there were many downgrowths that were more or less united, and there were numerous epithelial pearls.

74. **Eosinophilia in Scabies.**—Eighteen cases of scabies were studied by Kolmer during an outbreak of scabies in an institution for children. All were well-marked clinical cases and were under treatment by means of hot baths and sulphur ointment. With the exception of scabies the children were otherwise healthy and represented the usual institutional type. During the first week the disease was characterized by a well-marked uniform eruption and numerous scratch marks. By the third and fifth weeks a few cases were practically recovered. The larger number, however, were quite refractory to treatment, suffered with many relapses, and during the sixth and eighth weeks the lesions were well defined. The disease was accompanied by a mild leukocytosis, according to the degree of severity, which reaches normal as the disease is cured. The eosinophils were relatively and absolutely increased in a fairly well-marked degree. Kolmer believes that this eosinophilia probably bore a relation to the severity of the disease, being highest during the acne of the eruption, and gradually reaching normal as the disease is controlled. The highest leukocyte count was 13,700; the highest eosinophil count 9 per cent.; the lowest 3 per cent.

Iowa Medical Journal, Des Moines

May

75 Syphilis from the Standpoint of the Gynecologist and Obstetrician. G. N. Ryan, Des Moines.
76 Anesthesia During Labor. A. H. McCreight, Fort Dodge.
77 School Life and Its Influence on the Development of the Future Mother. A. Crawford, Mount Vernon.
78 Postoperative Intestinal Ileus. C. Burnside, Des Moines.
79 Macroglossia. E. E. Harris, Grinnell.
80 Hematomyelia. A. D. Woods, Melbourne.
81 Symptoms and Differential Diagnosis of Tuberculous Hip-Joint Disease. C. M. Jacobs, Chicago.
82 A Case of Pellagra. W. E. Sanders, Baltimore.

Pennsylvania Medical Journal, Athens

May

83 *Observations of Mitral Stenosis. J. C. Wilson, Philadelphia.
84 *Treatment of Cardiac Irregularities and Cardiac Weakness. A. Stengel, Philadelphia.
85 *Blood-Pressure in Hypertrophy and Dilatation of the Heart. J. H. Barach, Pittsburg.
86 *The So-Called Nodal Rhythm of Mackenzie. J. Sailer, Philadelphia.
87 *Diagnosis of Hay Fever in Children. W. C. Hollopeter, Philadelphia.
88 *Treatment of Hemorrhage in Tuberculosis of the Lungs. J. Walsh, Philadelphia.
89 Surgery as a Prophylactic Measure Against Intestinal Complications in Typhoid Fever. L. J. Hammond, Philadelphia.
90 Pennsylvania State Pilots. W. C. Posey, Philadelphia.
91 Detachment of the Retina. G. B. Jobson, Franklin.
92 The Artefacts of Insanity. W. K. Walker, Pittsburg.
93 Total Blindness from the Toxic Action of Wood Alcohol, with Recovery of Vision Under Electricity. S. L. Ziegler, Philadelphia.
94 Diagnosis and Treatment of Eczema. M. B. Hartzell, Philadelphia.

83, 84, 85, 86. Abstracted in The Journal, Oct. 29, 1910, p. 1581.

87. Abstracted in The Journal, Nov. 5, 1910, p. 1672.

88. **Treatment of Hemorrhage in Lung Tuberculosis.**—Walsh considers Epsom salts one of the most important remedies in connection with hemorrhage. It usually has the revulsive effect of the emetic without producing emesis. In addition to its irritant action it dilates the intestinal blood-vessels and removes a certain amount of liquid from the circulation, thereby thickening the blood. It, therefore, practically takes the place of aconite, venesection, tincture of veratrum viride, emetics and table salt. It even takes the place of ligation of the extremities unless the hemorrhage is severe and continuous. A half ounce should be given at once and may be repeated in two hours, especially if the bleeding continues. If it appear necessary, in order to reassure the patient, to give something every few minutes, a half ounce of Epsom salts may be given at once and 10 grains in a teaspoonful of water every fifteen minutes thereafter. In the great majority of cases absolute rest in bed and Epsom salts are sufficient to control the hemorrhage. All the agents employed for this purpose are discussed by Walsh.

Colorado Medicine, Denver

May

95 Neurasthenia an[illegible] W. Lazell, Denver.
96 Five Hundred [illegible] According to Arneth's Method. W. [illegible] Springs.
97 Medicolegal Asp[illegible] Dislocations from a Roentgen-Ray Standpoint. S. B. Childs, Denver.
98 A Case Illustrating the Value of Cesarean Section in Eclampsia. T. M. Burns, Denver.

Laryngoscope, St. Louis

April

99 This issue contains a complete index-medicus of oto-laryngology for 1910 and abstracts of the important papers published.

Virginia Medical Semi-Monthly, Richmond

May 12

100 Hematocele. G. T. Harrison, New York.
101 Prevalence and Prevention of Uncinariasis in Virginia. A. W. Freeman, Richmond.
102 Relation of Hookworm to Other Diseases. R. L. Raiford, Sedley, Va.
103 Other Work for Boards of Health—Added Laws if Necessary. S. G. Slaughter, Lynchburg, Va.
104 Lesions of the Sacro-Iliac Synchondrosis. J. Dunlop, Washton.
105 Pupillary Reaction in Health and Disease. C. W. Banner, Greensboro, N. C.

Lancet-Clinic, Cincinnati

May 27

106 *Treatment of Pernicious Anemia Associated with Achylia Gastrica. A. C. Croftan, Chicago.
107 Nitrous-Oxid-Oxygen Anesthesia in Surgery. H. J. Whitacre, Cincinnati.
108 State Requirements for Entrance to Medical Colleges. P. G. Woolley, Cincinnati.

June 3

109 *Interesting Gastric and Intestinal Cases. J. E. Greiwe, Cincinnati.
110 Data Concerning Rabies and the Efficiency of Pasteur Immunization. A. P. Cole, Cincinnati.
111 Methods of Teaching Practical Obstetrics. G. B. Booth, Toledo, Ohio.

106. Abstracted in THE JOURNAL, October, 1911, p. 1221.

109. **Gastric and Intestinal Cases.**—Three cases are reported by Greiwe. One deals with ulcer of the stomach and the development of the pyloric obstruction following. The skiagram showed a marked retention of the bismuth mixture eight hours after feeding. The second deals with a case of obstinate constipation, which by means of the skiagram was demonstrated to be one to a sharp angulation both at the hepatic and the splenic flexures of the colon. In the third case a calcareous mass completely filled the pelvis of the kidney and extended in a branched fashion into the right kidney substance itself.

Medical Record, New York

June 3

112 Present Status of Inoculation Therapy. M. J. Synnott, Montclair, N. J.
113 *Method of Diagnosing and Following a Fistulous Tract. J. M. Lynch, New York.
114 *Are Pneumonia and Rheumatism Specific Infections? T. G. McConkey, San Francisco.
115 *The Cause of Belching. D. Roberts, Brooklyn, N. Y.
116 Acute Gonorrheal Epididymitis. C. M. Walson, St. Louis.
117 Mental Suggestion as a Substitute for Anesthetics in the Removal of Tonsils and Adenoids from Children. F. D. Gulliver, New York.

113. **Method of Diagnosing a Fistulous Tract.**—The tracer Lynch has used for the past eight years (not before published) is a mixture of peroxid of hydrogen and a saturated solution of methylene blue. He has learned to appreciate the value of this method as a means of diagnosis, and of its almost unvarying reliability in those very complicated fistulous tracts where the communication between two fistulæ was so narrow as to make it impossible for any probe to pass no matter how fine, especially when the angle between the transverse and longitudinal fistulous tracts was very acute. He says that the peroxid of hydrogen will carry the methylene blue into the finest ramifications of the tract, the methylene blue stains the tract, and when the surgeon comes to operate it is a very simple thing to follow it.

114. **Are Pneumonia and Rheumatism Specific Infections?**—Briefly, McConeky's paper may be summarized as follows: (1) Pneumonia and rheumatism are not specific infectious diseases like typhoid or small-pox, but each is a mere symptom-complex dependent on and secondary to tuberculous vegetations or lesions on the pleura, pericardium, endocardium or periarticular tissues. (2) The streptococcus normally present in the mouth and nasal cavities is the most frequent secondary invader of this abnormal itssue; but staphylococci, Friedländer's bacillus and the specific microorganisms of typhoid, diphtheria, gonorrhea, etc., may also be secondary invaders as well. (3) Whether the symptom-complex called pneumonia or the one called rheumatism occurs, depends on the accident of the location of this damage of tuberculous causation. (4) If situated on the pleura, pneumonia is the diagnosis, provided consolidation occurs; otherwise it is called pleurisy. If situated on the joints alone or in connection with the endocardium or pericardium, it is diagnosed rheumatism. If situated on the endocardium alone and not followed by consolidation of the lung, as it frequently is, it is called endocarditis; but if consolidation occurs it is erroneously called pneumonia complicated with endocarditis.

115. **The Cause of Belching.**—Belching and fermentation are in no way dependent one on the other etiologically, says Roberts. Gas in the stomach, he says, is rarely anything but swallowed air, as true fermentation takes place in the stomach only as a result of actual stasis. Slight, unobtrusive eructation of gas after a full meal is not to be looked on as a morbid phenomenon. Any slight epigastric sensation and occasional eructation are readily exaggerated in the mind of the hypochondriacal. Belching is really a voluntary act, either attempted, permitted or performed in a more or less exaggerated manner to give relief from a real or fancied distress referred to the stomach. The sensation of distress may arise from any organ adjacent to the stomach. The most exaggerated form of belching results from temporary or habitual emotional states, the air not being raised from the stomach but merely gulped into the pharynx and brought up again. If belching gives actual relief from distress it is fair to presume, Roberts says, that the presence of air in the fundus of the stomach is at least a contributing factor in causing the discomfort. Belching, which originally has relieved, may be carried to extremes, particularly in the emotionally excitable. Such a reasonably produced aerophagia often obscures grave underlying disturbances of the circulatory system and the upper digestive tract, the belching being continued after all air has been forced from the fundus. Gas is complained of in a variety of abdominal abnormalities when careful questioning shows belching is practiced. The patient presumes the distress is due to gas. This is particularly common in the discomforts associated with disease of the biliary tract, appendix and colon.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London

May 20

1 Nature of the Immunity Reaction. C. J. Bond.
2 The Hulton Colliery Explosion. W. A. Hatton.
3 Two Cases of Severe Injury Near the Knee. R. Parker.
4 *Vaginal Hysterectomy for Endometritis. F. P. Sturm.
5 A Case of Traumatic Pneumothorax and Pleural Effusion Successfully Treated by Resection. F. S. Rhodes.
6 The Standardization of Preparations of Indian Hemp. C. R. Marshall and J. H. Wigner.
7 *Duodenal Obstruction as Shown by Radiography. A. C. Jordan.

4. **Vaginal Hysterectomy for Endometritis.**—The following case is recorded by Sturn because an unusual, not to say heroic, method of treatment for a fairly common and very troublesome condition has resulted in a measure of success which, he says, is not often attained by the less drastic procedures usually carried out in cases of equal severity. A married woman, 39 years of age, who had been a hard worker all her life, and was the mother of a large and healthy family, complained of constant dragging pains in the groin and back, dysuria, menorrhagia and a profuse semipurulent discharge which was occasionally offensive. For several years she had been practically a chronic invalid, and so profoundly was her general health undermined by the constant pain and discomfort that both she and her relatives were convinced of the presence of malignant disease. She said that she had undergone several operations. Examination revealed a large "boggy" uterus, extremely painful on pressure, freely movable in every direction, with the fundus well above the pelvic brim. The sound passed 4 inches. The cervix, which was the size of a Tangerine orange, was studded with innumerable small semitransparent nodules and was very friable to the touch. The nodules were soft, there was no ulceration, and the general appearance was not that of malignancy. Pressure on the uterus caused quantities of muco-pus to pour through the cervical canal. The possibility of specific infection was excluded by repeated microscopic examinations for the gonococcus, which was never found. The chronic course of the disease and the very gradual deterioration of health from the long-continued pain and discharge were also points which were against the probability of malignant disease. On the other hand, the uselessness of any more scraping operation was so evident and the danger of ultimate malignant degeneration so real that Sturm had no hesitation in suggesting hysterectomy. The uterus was removed by the vaginal route. Sturm saw this patient only a few days ago—that is, about ten months after the operation. She was enjoying perfect health for the first time in many eyars. She is able to perform all the onerous household duties which fall to the lot of women of her class, even including the weekly washing. Sturm claims, therefore, that she is cured in the fullest sense of the term.

7. **Radiography in Duodenal Obstruction.**—A very careful radiographic study by Jordan has convinced him of the existence of the so-called Lane's kink. He found that duodenal obstruction is frequently associated with obstruction at the lower end of the ileum or in the large intestine. Many of the patients exhibit dropping, not only of the stomach, but

also of the large intestine. There is frequently great delay in the passage of feces through the large intestine, and in some cases there is considerable delay in the last portion of the ileum. However, the duodenal obstruction is often the most marked abnormality, and may be the only one which calls for active treatment. In such cases, Jordan says, the operation of gastrojejunostomy relieves all symptoms, and this operation may be expected to do more than place the duodenum at rest by cutting it out of the circuit. As Mr. Lane has pointed out, the jejunum, when attached artificially to the stomach, is supported in such a way that it cannot drop and cause kinking at the duodenojejunal junction.

Lancet, London

May 20

8 *Postoperative Lung Complications. W. Pasteur.
9 Mental Disorders and Suicide. G. H. Savage.
10 *Treatment of Malignant Growths by Radium. C. M. Moullin.
11 *Radium Treatment of Cancer. N. S. Finzi.
12 Diffuse Lipoma and Animals. Sir J. Hutchinson.
13 A Case of Thrombosis of the Superior Vena Cava and Great Veins. F. C. Davis.
14 Our Inability to Diagnose Gross Lesions of the Appendix. E. M. Corner.
15 A Case of Ovarian Cyst in a Nyasaland Woman. H. S. Stannus.

8. Post-Operative Lung Complications.—Pasteur endeavors to prove that deflation of the pulmonary bases, resulting from reflex inhibition of diaphragmatic movement, is an essential, if not the chief, factor in the causation of postoperative pneumonia, and that the rôle of the anesthetic is only a very secondary one.

10. Radium Treatment of Malignant Growths.—So far as our present knowledge is concerned, with the small quantities that we have at our command, Moullin has come to the conclusion that radium can only be relied on, and that to a limited extent, in cases of malignant disease in which growth is slow and the degree of malignancy relatively slight. On the other hand, it is of the greatest value in what may be called the pre-malignant stage; that is to say, in removing growths which not infrequently become malignant as age advances, without an operation and, what is very important, not merely for cosmetic but for clinical reasons, without leaving much of a scar; and there is good reason to hope that if the small quantities we possess now are capable of dealing with growths of relatively mild malignancy, larger amounts, when we get them, will prove equally successful in circumstances of greater difficulty.

11. Radium Treatment of Cancer.—Finzi has treated, or has under treatment, excluding rodent ulcer, altogether 177 patients with cancer. All except four of these were inoperable. He excludes three patients subsequently operated on, four cases treated for prophylaxis only, eight cases in which sufficient treatment was refused, and three cases not treated long enough to judge the result—in all eighteen cases. This leaves ninety-nine cases. Of the cases (twelve) in which growths have disappeared, two patients have died from intercurrent disease—one from cardiac disease and cerebral embolism, and the other from a strangulated umbilical hernia. In the first no necropsy was obtained, but there were no symptoms of recurrence; in the other there was a necropsy, and there were deep recurrences in the liver. In one case (lip) there is no local recurrence, but the marked cachexia (18 months after treatment commenced) leads Finzi to suspect deep recurrences; no definite sign of these is present, however. In two other cases there are recurrences. Many of the patients were treated for relief only, without any possibility of cure, but even then complete local disappearance took place in about 12 per cent., and there are several others well on their way to disapear. Very great relief was secured in twenty cases, substantial relief in forty-two, and no relief in twenty-five. Finzi's results show that in patients who would otherwise be doomed, complete local disappearance of the growth occurs in 12 per cent., relief of pain or other symptoms in 62 per cent., and no relief in 25 per cent. He claims that every local inoperable growth of suitable type should be treated with radium, and that prophylactic treatment should be used after every operation for cancer. It is necessary, however, to use large quantities of radium and metal filters at least 1.5 mm., thick of lead or platinum. Since Finzi has used 200 mg. of radium in his later cases his results are showing promise of being very much better than when he used 50 mg.

Clinical Journal, London

May 10

16 Recent Developments in Methods of Diagnosis. Sir W. H. Allchin.
17 Fibroids of the Uterus and Their Complications. C. Berkeley.

May 17

18 Ocular and Visual Conditions in Medical Cases. J. Taylor.
19 Medical Cases in Ophthalmology. P. Flemming.

Glasgow Medical Journal

May

20 *Acute Pneumonia: Its Prognosis and Treatment. G. A. Gibson.
21 Enucleation of the Tonsil for Chronic Disease. W. S. Syme.
22 The Roentgen Rays in Treatment. J. R. Riddell.

20. Acute Pneumonia.—The local treatment or use of external applications in pneumonia is decried by Gibson, although he admits that when there is pain, due to any pleurisy accompanying acute pneumonia, external applications of heat are extremely soothing. It is better, he says, under such circumstances, to employ small poultices, and change them frequently, than to envelop the patient in an extensive application. In certain cases of early acute pneumonia, in strong, robust individuals, the employment of cold, either in the form of the icebag or the cold water coil, will be found decidedly beneficial; and, lastly, when there is a high degree of pyrexia (and, still more hyperpyrexia), the use of sponging and the wet pack—and even the cold bath—may be absolutely necessary.

Medical Press and Circular, London

May 10

23 Clinical and Experimental Observations on Malignant Syphilis and Salvarsan. A. Buschke.
24 Acute Pancreatitis with Pancreatic Pseudocyst. R. A. Stoney.
25 Ionization by Salicylate of Soda as a Treatment for the "Rheumatic" Knees of Middle-Aged and Elderly Women. F. Hernaman-Johnson.
26 Present Condition of Vaccino-Therapy. H. Pritchard.
27 Dilatation of the Os Uteri in Labor. G. DeG. Griffith.

May 27

28 Treatment of Cysts and Pseudocysts of the Pancreas. W. Korts.
29 Hyperemic Treatment in Dermatology. W. K. Sibley.
30 One Hundred and Fifty-One Cases of Appendicitis Treated During the Past Three Years. R. W. Murray.

British Journal of Children's Diseases, London

May

31 A London School Clinic. M. D. Eder.
32 *Inherited Syphilis and Blue Sclerotics. J. D. Rolleston.
33 Acute Pyelitis Due to [illegible] mplication of Congenital [illegible]
34 A Case of Stokes-Adam [illegible] A. J. Cleveland.

32. Inherited Syphilis and Blue Sclerotics.—The principal features of interest in Rolleston's case are (1) the extragenital infection of the mother; (2) the spontaneous fracture of the humerus of the child; and (3) the condition of blue sclerotics in three generations. Although no Wassermann's reaction was performed, the history of the case and the position of the scar made it practically certain that a lesion on the lip of the mother had been a chancre. When three weeks old the baby lost all power in his left arm, but recovered the use of the limb in the course of a month without specific treatment, and when six weeks old had "thrush at both ends." which was probably mucous tubercles in the mouth and round the anus. Both sclerotics show a uniform pale blue coloration; irides grey, embryontoxon at the margin of each cornea. During the child's stay in the hospital the blue coloration of the sclerotics was more obvious on some days than on others. The mother, aged 27, a woman of fair complexion, presented an almost identical condition of the sclerotics, but the coloration was somewhat deeper, more nearly approaching a leaden hue. An arcus senilis was present in each eye. Beyond occasional smarting on exposure to wind and lacrymation following prolonged accommodation, her eyes had not caused her any trouble. She stated that her sister, a fair-haired girl, aged 16 years, presented the same condition, as did also their grandmother, now dead. Their two brothers, aged 37 and 22 years, respectively, were not affected.

Annales de l'Institut Pasteur, Paris

April, XXV, No. 4, pp. 289-368

35 Can Oxyhemoglobin Act as a Peroxydase? J. Wolff and E. de Stoecklin.

36 Fate of Components of Pancreatic Juice in the Course of Its Activation. M. Nicolle and E. Pozerski.

37 Bacterial Flora of Large Intestine of Horse. J. Choukévitch. Commenced in No. 3.

Bulletin de l'Académie de Médecine, Paris

April 25, LXXV, No. 17, pp. 523-544

38 *The Dangers in Treatment of Obesity. (Les écueils des cures d'amaigrissement.) M. de Fleury.

39 *Practical Treatment of Obesity. (Traitement pratique de l'obésité fondé sur l'étude des échanges organiques.) A. Robin.

38. **Dangers in Treatment of Obesity.**—De Fleury has often found a history of inherited taint or of trouble years before, suspicious of tuberculous glandular, pleural or bronchial disease, in persons with a tendency to obesity in adult life. He has also known of six or seven cases in which too vigorous treatment of the obesity was followed by development of active tuberculosis, probably the flaring up of long latent disease. In other cases the benefit of the anti-obesity measures was but transient. He insists on the importance of careful examination of the patient for signs of tuberculosis before attempting treatment of obesity, and not allowing the treatment to be such as to debilitate the patient, and on the necessity for keeping the patient under supervision during the entire course. The measures should aim not only to reduce the fat and ensure its more perfect oxidation but also to restore nerve and muscle force, modifying the diet completely without rendering it distasteful, with exercise and with plenty of water between meals, and one small tumblerful with the meals, one on rising and retiring, with another at 9, 10 and 11 a. m. and again at 4, 5 and 6 p. m. A half hour of out-of-door exercise three times a day, and especially in the evening, is excellent in toning up the muscular system; but still better, he declares, is a course of systematic muscular exercises according to F. Heckel's method of "morphogenetic myotherapy" or Bergonié's method of prolonged and frequently repeated faradization of a whole group of muscles at once. De Fleury has also obtained great benefit from very small daily doses of thyroid extract; but even greater effect can be obtained by stimulating the ductless glands to increased secretion by repeated subcutaneous injection of small amounts of a hypertonic artificial serum, such as a solution of 8 parts sodium sulphate, 4 parts sodium phosphate, 2 parts sodium chlorid and 100 parts water. This serotherapy stimulates the internal secretions and this in turn promotes the metabolism and the appetite increases while the food is utilized better, muscular tone is regained and the patient feels better in every way. If the urine shows traces of albumin with urobilin or indican and tube casts, he restricts the patient for three days to a glass of milk mixed with an alkaline water or skimmed, taken every hour. After this he discards milk entirely as well as all fattening foods and those that putrefy readily, as he believes that intoxication from the food is frequently the source of the obesity. He emphasizes repeatedly the importance of slow eating and long chewing, bradyphagia, he calls it, remarking "the American sect of Fletcherites does not include any obese members."

39. **Treatment of Obesity.**—Robin's method is based on study of the individual organic interchanges, especially the respiratory interchanges. Five small meals are allowed with a walk immediately after the first three, of half an hour at least, avoiding sauces and all beverages except very weak tea. The lunch at 11 a. m. of one or two soft boiled eggs and a little bread, followed by a walk, prevents the patient's being very hungry for the midday meal; the large cup of very weak tea at 5 p. m. and a cracker also reduces the appetite for dinner. He has the twenty-four hours' urine measured; if the amount increases under this régime the outlook is very encouraging. If it does not increase, more fluids should be ingested. The obese patient eating in this way will not feel the restrictions irksome but the total of calories is much below the physiologic amount for the weight. He gives the details of the menu and cites a number of examples to show the benefit from this method in the 200 cases in which he has applied it.

Bulletins de la Société de Pédiatrie, Paris

April, XIII, No. 4, pp. 153-218

40 Direct Lymphocyte Count in the Cerebrospinal Fluid Preferable to Centrifuging. (La numération directe des éléments figurés dans le liquide [illegible] méthode de Jean Nageotte.) M. [illegible]

41 *Hypertrophy of the Thymus. V. V. [illegible] radioscopique et radiographique dans le diagnostic de l'hypertrophie du thymus.) M. Ferrand and C. Chatelin. (Hypertrophie du thymus; spasme de la glotte; tétanie et rachitisme chez un enfant de 8 mois.) C. Chatelin.

42 *The Biuret Reaction in Examination of the Stools. (Un détail de coprologie dans les états infectieux fébriles. La réaction du biuret.) H. Triboulet.

43 *Influence of Thyroid Treatment on Growth in Rachitis. G. Variot and Pironneau.

41. **Hypertrophy of the Thymus.**—Veau reports the case of a child with a suppurating gland, one each side of the trachea, behind the innominate vein, which he opened and drained and the child can now be regarded as cured. He advises operating in such cases if tuberculosis can be excluded. He also calls attention to the spasm of the glottis with general convulsions, accompanying brain lesions or other cause, and for which the thymus is not responsible, even though it may be unduly large. Thymectomy in these cases has no effect on the spasm of the glottis, as he has demonstrated by personal experience. In the idiopathic spasm of the glottis, a manifestation of tetany, removal of the thymus may cure the tendency, and he has reported a case of the kind, the child having no further spasms after the thymectomy although he had had twenty-seven attacks the day before and had been regarded as moribund.

Ferrand and Chatelin give skiagrams of a number of cases to show the great value of radioscopy to detect or exclude hypertrophy of the thymus, comparing the findings with the normal picture and with glandular disease. With the latter the outline of the shadow is knobby instead of the comparatively smooth outline of the enlarged thymus, blending with the heart shadow below. In their cases the glandular shadows were on the right side, while with the enlarged thymus the shadow was more in the center or protruding more on the left side of the spine, the whole looking like a large pear in some cases; in others the shadow is wider at the top than in the heart region. With glandular lesions the shadow is less opaque at the edges than at the center, while with hypertrophied thymus the shadow is of a uniform depth throughout. The shadows of the glands sometimes show as a chain and sometimes the scalloped outline on the right extends very high. When there are both a hypertrophied thymus and glandular lesions, differentiation is naturally difficult. Four typical cases are described in detail. Veau thinks that the possibility that the thymus may secrete a toxin which normally the parathyroids neutralize, is another argument in favor of thymectomy in case of tetany with suspicion of enlargement of the thymus. Chatelin reports a case of tetany and spasm of the glottis in a rachitic child in which nothing otherwise seemed to indicate the presence of an unduly large thymus but necropsy revealed a very large thymus with almost complete degeneration of the parathyroids. In the discussion that followed, Netter called attention to the importance of systematically examining for Chvostek's sign not only in infants but in children of all ages, and, when found, administering lime salts. He has found them very effectual in reducing the abnormally nervous condition of such children.

42. **The Biuret Reaction in Estimation of Intestinal Functioning.**—Triboulet has found that the biuret reaction may be observed as the manifestation of the non-assimilation of certain heterogeneous albumins, especially the casein of milk, but as a rule it is encountered only with intestinal catarrh. This catarrh may occur during the incubation or as a symptom or sequel of acute infection, and with the biuret reaction its progress can be traced. Intestinal catarrh is far more frequent in acute infections than has hitherto been recognized; it explains the loss of appetite and of weight. The inability to assimilate fats and casein which results from this intestinal catarrh confirms the importance of dieting in the course of the acute infections. Patients sick with typhoid, measles, pneumonia, etc., may be unable to digest even small amounts of milk; their ability in this line is instructively demonstrated by the biuret reaction in the stools: About 2 c.c. of stool is stirred into 4 c.c. of a 5 per cent. solution of sodium

carbonate and filtered. Then 2 c.c. of sodium hydrate is added to the filtrate and into this is added, a drop at a time, 5 or 6 drops of a 2 per cent. solution of copper sulphate. A blue disk forms with normal stools, while the tint is a reddish violet with intestinal catarrh or non-assimilated casein.

43. **Thyroid Treatment in Rachitis.**—Variot and Pironneau gave the thyroid extract merely to hasten the growth of the children, which was abnormally backward. In the five cases reported the effect was marked, the children rapidly increasing in height under the influence of the mild organotherapy, and without displaying any evidences of intolerance. They seemed to benefit in every way by the thyroid treatment, becoming more intelligent and lively during the two-weeks' and six-weeks' courses with an interval of two months.

Presse Médicale, Paris

May 6, XIX, No. 36, pp. 361-376

44 *Vestibular Nystagmus. M. Lermoyez and A. Hautant.

May 10, No. 37, pp. 377-384

45 The Domain of Psychiatry. G. Ballet.

44. **Vestibular Nystagmus.**—Lermoyez and Hautant discuss the mechanism of nystagmus under the influence of cold or heat, showing how the features of the nystagmus are able to localize the seat of the trouble in the semicircular canals. It is possible by this simple temperature test for the general practitioner to determine whether the labyrinth is becoming involved in case of middle ear disease, as injection of hot or cold water into the ear induces the characteristic nystagmus. They give illustrations of the technic.

Revue de Chirurgie, Paris

May, XXXI, No. 5, pp. 513-648

46 *Arteriovenous Anastomosis for Endarteritic Gangrene. E. Quénu.

47 Isolated Fracture of the Lesser Trochanter. A. Binet and A. Hamant.

46. **Arteriovenous Anastomosis for Endarteritic Gangrene.**—Quénu reports a case of arteriovenous anastomosis which, he says, brings to twenty-eight the total on record. He reviews them all, his final conclusions not being at all favorable in regard to the ultimate outcome; the results obtained in operations on dogs can not be applied to conditions in the clinic where the diseased vessels render an inverse circulation scarcely possible. He knows of only one case (Wieting) in which the gangrene was permanently arrested by the anastomosis, and in this case the gangrene had been merely threatened. Quénu says that the best means to combat the chilliness and local asphyxia is by cutting the nerve-trunks and shutting off the nerve-supply from the limb. When the limb becomes warm again after the arteriovenous anastomosis this indicates, he thinks, that the arterial blood finds its way down through the vein, but only mixed with venous blood and incapable of nourishing the tissues efficiently.

Semaine Médicale, Paris

May 10, XXXI, No. 19, pp. 217-228.

48 *Thrush in the Lungs. (Le muguet pulmonaire et ses rapports avec la dothienentérie.) C. Garin.

May 17, No. 20, pp. 229-240

49 *The Diagnostic and Therapeutic Importance of the Knee-Chest Position in Internal Disease. (La position genupectorale dans les maladies internes.) L. Cheinisse.

48. **Pulmonary Thrush.**—Garin reports the case of a woman aged 41, convalescing from typhoid, when mycotic stomatitis developed with general symptoms and albuminuria, moist râles at the apices and dulness over the supraspinous fossæ, with profuse thick sputum, suggesting that of pneumonia, but found to contain the fungus causing thrush. The patient succumbed a week later in progressive cachexia. The necropsy findings showed actual thrush of the lungs but guinea-pigs inoculated with the parenchyma of the lungs did not seem to be affected. Artault has reported a similar case, likewise in a typhoid patient after defervescence, but his patient recovered. It is possible that such cases are comparatively frequent. Thrush should be suspected when physical signs develop at the apex during convalescence from typhoid fever. It may prove possible to obtain unexpected recoveries by iodid treatment. In the case reported the naked-eye aspect of the lung suggested ordinary tuberculosis except for the absence of tubercles and of enlarged glands; the liver and spleen were both abnormally large.

49. **Knee-Chest Posture as an Aid in Diagnosis and Treatment of Internal Disease.**—Several French writers have recently published cases of effusion in the pericardium in which the patients found relief only when the knee-chest position was assumed. This was observed with pericarditis following rheumatism or scarlet fever, and kidney disease, and Hirtz even asserts that when relief from the symptoms on the part of the heart is obtained only in the knee-chest position, this testifies to the existence of pericarditis with effusion. In a case reported by Cheinisse, however, there could be no question of pericarditis, and yet the patient instinctively sought relief in the knee-chest position during recurring attacks of severe pain above and to the right of the umbilicus, radiating to the epigastrium, and certain features of the anamnesis suggested the possibility of a duodenal ulcer. Umber reported last year a case of duodenal ulcer in which the patient found relief only in the knee-chest position; the ulcer in this case was in the posterior wall of the duodenum and was adherent to the pancreas. Duodenal ulcer is sometimes accompanied by a reflex dyspnea, suggesting pericarditis, and Wynter has recently called attention to the absence of abdominal respiratory movements as an indication of pericarditis. On the other hand, in some cases with symptoms ascribed to a perforated gastric ulcer or peritonitis, they proved to be the manifestations of a pericarditis, and Voelcker has recently reported the case of a child with supposed pericarditis or pneumonia who proved to have diffuse peritonitis from appendicitis. Fellenberg's case, in which the disturbances from a wandering kidney were kept under control by assuming the knee-chest position during the attacks, was recently mentioned in these columns, page 1135. Occlusion of the intestine from kinking or distention changes, with traction on the root of the mesentery, the so-called arteriomesenteric duodenal occlusion, has been repeatedly effectually combated by having the patient assume the ventral decubitus or the knee-chest position, and Tarnier used to take advantage of the mechanical conditions in the "Mohammedan prayer attitude" as a systematic means of treating certain displacements of the uterus.

Beiträge zur klinischen Chirurgie, Tübingen

April, LXXII, No. 3, pp. 581-818

50 Transduoden[illegible] Duct with Plastic Operation on Th[illegible] Duct. F. Voelcker.

51 *Indications [illegible] After Contusion of the Kidney. [illegible] perativem Eingreifen bei subkutane[illegible] F. Voelcker.

52 Myotomy of Gluteus Maximus for Snapping Hip Joint. (Offene Myotomie des Musculus glutaeus maximus bei schnellender Hüfte.) F. Voelcker.

53 *Technic for Extraperitonization of Inflammatory Foci. (Extraperitonisierung entzündlicher Herde.) F. Voelcker.

54 *Sacral Excision of the Rectum. F. Voelcker.

55 *Pararectal Prostatectomy in Ventral Decubitus. (Konservative Enukleation [illegible] stata auf pararectalem Wege in [illegible]

56 Cystoscopic Views [illegible] of the Prostate. (Cystoskopische S[illegible] der Prostata.) F. Voelcker.

57 *Excision of Tuberculous Seminal Vesicles with Temporary Displacement of the Rectum. (Excision tuberkulöser Samenblasen mit temporärer Verlagerung des Rectum.) F. Voelcker.

58 *Successful Arsenic Therapy of Apparently Inoperable Sarcoma of the Spine. (Heilung scheinbar inoperabler Wirbelsarkome durch Arsentherapie.) E. Manheimer.

59 *Injuries of the Kidneys. (Ueber Nierenverletzungen.) E. Keuper.

60 *Plastic Operations on Kidney Pelvis and Ureter. F. Weinberg.

51. **Indications for Operative Treatment with Contusion of the Kidney.**—Voelcker comments on the recent statistics of traumatic lesions of the kidney showing a mortality of 14.6 per cent. in 143 cases with a conservative operation and of 16.7 per cent. in 131 nephrectomies, while 20.6 per cent. of the 427 patients not given operative treatment died. This comparative mortality is the more striking when we reflect that only in the severest cases is operative treatment applied. The main points are to determine whether the vessels and the kidney pelvis are torn and whether there is infection. The nature of the accident does not answer these questions, and the intensity of the hematuria is not always an index of the severity of the injury. None of the symptoms is absolutely reliable, but cystoscopy, supplemented possibly by catheterization of the ureters, throws a flood of light on conditions at

once, and he advises this as the routine procedure when there is any doubt. Even mere cystoscopy will show whether the urine is being regularly expelled in a strong jet from the ureter mouth. If the urine is blood-stained, this shows which kidney is injured and that the pelvis and ureter are not torn, and that the passage from the pelvis to the bladder is open. This knowledge excludes the fear of infiltration of the urine and shows that the functioning of the kidney is not materially impaired. The closer to normal the conditions in the secretion, the greater the liability that the injury is confined to the cortex. Chromocystoscopy, that is, inspection of the stained urine after giving indigo carmin, illuminates conditions still further. Fresh blood is red, and if the blood in the urine is brownish, it shows clotting of the blood in the pelvis or bladder. Catheterization of the ureter answers the question as to the presence of infection. If the bloody urine is expelled in approximately normal amounts and rhythm, conservative treatment is indicated, but if no blood or urine enters the bladder from the injured kidney and none can be obtained through the introduced ureter catheter or there is merely blood or a few clots, there is evidently some laceration of the pelvis permitting escape of the urine into the surrounding tissues, or the kidney has been destroyed to such an extent that the secretion of urine is arrested. In either case operative treatment is imperative. If stagnating urine is found in the pelvis, this excludes laceration; the obstruction to the outflow of the urine is probably pressure from some hematoma nearby, with edematous swelling of the mucosa of the pelvis and ureter. Even with these findings, if the pelvic urine is aseptic, conservative treatment is indicated. In case of infection, operative measures should not be delayed. A case reported shows that stagnation of urine in the pelvis may cause the most intense pains, even without direct injury, and evacuation of the urine relieves at once.

53. **Extraperitonization of Inflammatory Foci in the Abdomen.**—Voelcker strives to wall off the focus after its evacuation by inducing what he calls extraperitonization. He accomplishes this with a series of pieces of gauze spread out flat over the walls of the cavity in such a way as to form a funnel, from the center of which project the stumps of the organ or the tissues whose necrosis is dreaded. The irritation from the gauze causes the throwing up of adhesions, soldering the peritoneal surface together, so as to bury completely the cavity. By this method of tamponing, the field is thus extraperitonized from the rest of the peritoneum, and he relates a number of cases in which this technic proved a safe reliance. The list includes some infected abdominal wounds, gangrenous hernia, abscesses, resection of the cecum, tuberculous fistula into the intestine, and for extraperitoneal drainage of retroperitoneal cellular tissue.

54, 55, 57. **Pararectal Operations.**—Voelcker lauds the advantages of the sacral route for excision of the rectum, having found that, with the patient in the ventral decubitus, unusually favorable conditions for the operation were obtained after drawing the rectum to one side and dividing the gluteus maximus, the levator ani and the pelvic fascia. His experience with excision of the rectum by this technic was so encouraging that he has applied it also in removal of the enlarged prostate, permitting retention of the prostatic portion of the urethra. He calls this conservative enucleation, and describes the technic with which it is possible to do prostatectomy by the sacral route, giving eight case histories in which the outcome was excellent, except in the one case of malignant disease. He also describes two cases in which he removed tuberculous seminal vesicles with this technic, drawing the rectum to one side.

58. **Cure of Spinal Sarcoma Under Arsenic.**—After an incomplete operation on an osteoid spindle-celled sarcoma with myxomatous giant-celled parts, growing from the transverse process of the second lumbar vertebra, the patient was treated with intravenous injections of atoxyl. She was a girl of 16 and during the month after the operation before the atoxyl was begun, she seemed to be going down, but at once began to recuperate under the atoxyl and in a month seemed to be quite restored to health. There have been no signs of recurrence during the five months since. Sick has also observed great improvement under Fowler's solution or atoxyl after an incomplete operation for sarcoma, but one patient has since succumbed to recurrence; the other is still in good health, as is also a patient with sarcoma of the skull. In still another case the sarcomatous nodules of the skull retrogressed under intravenous injection of atoxyl. The elderly patient was in good health for two years but then recurrence was observed, which was refractory to further injections. The sarcomas in these cases all had the same histologic features, the sudden stormy onset, the involvement of muscles and bones, preventing a complete removal, and the remarkably favorable influence of the arsenic after an incomplete operation.

59. **Contusions of the Kidney.**—Keuper discusses the points on which the indications for treatment are based, and reports twenty cases, including fourteen with an isolated injury of the kidney; the others were complicated by fractures or the bursting of a hydronephrosis.

60. **Plastic Operations on the Kidney Pelvis and Ureter.**—Weinberg reviews the present status of these operations, adding forty-nine new cases to Kroiss' 102 from the literature, thus bringing the total to date to 151. This includes five unpublished cases from Voelcker's clinic, which he reports in detail. Among other points brought out is that the general condition is not sufficiently accurate for estimation of the ultimate outcome of these operations; cystoscopic examination years after will sometimes reveal unsuspected conditions when the outcome is supposed to be favorable in every respect.

Berliner klinische Wochenschrift

May 15, XLVIII, No. 20, pp. 877-924

61 *Action of Combinations of Drugs. (Untersuchungen über die Wirkung von Arzneigemischen.) E. Bürgi.
62 Melanosis of Mucosa of Large Intestine. (Melanose der Dickdarmschleimhaut.) L. Pick. Commenced in No. 19.
63 Inoculation of Monkeys with Malignant Syphilis. E. Tomasczewski.
64 *The Wassermann Reaction in the Asylums of Denmark. O. Thomsen, H. Boas, R. Hjort and W. Leschly.
65 Transplantation of Fascia. F. Rehberg.
66 Atropin and Vaccines in Treatment of Gonorrhea. (Neuere Gonorrhoebehandlung.) H. Hecht and E. Klausner.
67 Cultivation of the Leishman-Donovan Bodies. (Kultur und Modalitäten der Entwicklung der Leishman-Donovan'schen Körperchen.) G. Franchini.
68 Centrifuge in Determination of Uric Acid in Urine. (Ueber Harnsäurebestimmungen mittels der Zentrifuge.) A. Stephan.
69 Diagnostic Importance of Acquired Disturbances in Color Perception. (Erworbene Farbensinnstörungen.) H. P. Köllner. Commenced in No. 19.

61. **Combinations of Drugs to Enhance Potency.**—Bürgi has made over 1,500 experiments on rabbits with combinations of different drugs in eleven groups, mostly narcotics, and has discovered several laws regulating the action of the various combinations. Among the laws thus discovered is that a mixture of two drugs, especially of two narcotics, has an action which is merely the sum of the action of its two components when both belong to the same group, as, for instance, to the fatty series, or when both are alkaloids of opium. On the other hand, the potency of the action of both is much enhanced when the two components belong to different groups. He has also found that the action of a drug is enhanced when the dose is halved and given at an interval of from five to fifteen minutes. He is inclined to attribute this enhancing of the potency to the fact that the combined drugs act on more points than one drug alone, and also that even when they act on the same points, they act at different times, thus prolonging the medicinal action on these cells. The latter explanation applies also to the enhancing of the effect by halving the dose; this duplicates the action on the cells before the drug is swept away by the blood. Another point he has discovered is that an extremely minute amount of one drug will, in some cases, materially enhance the potency of another; for instance, scopolamin in the rabbit will not induce central anesthesia, even in large doses. The effect is exclusively peripheral. Given in amounts to kill the animals, they die but without preceding general narcosis. But even a tenth of a mgm., when combined with another narcotic, has the desired effect. This suggests that possibly the constituents in mineral waters which may be present only in minute amounts, may be of decisive importance for the general effect, and they should not be disregarded in the artificial production of mineral waters.

64. Summarized in The Journal June 3, 1911, p. 1698.

Deutsche medizinische Wochenschrift, Berlin

May 11, XXXVII, No. 19, pp. 865-912

70 Acute Gangrene of the Gall-Bladder With or Without Cholelithiasis. (Akute Gallenblasengangrän, mit und ohne Steinbefund in der Gallenblase.) P. L. Friedrich.
71 Cellular Anaphylaxis. (Enteritis anaphylactica, Conjunctivitis und Rhinitis anaphylactica—Heufieber—und deren sogen. [illegible] and W. Weichardt.
72 [illegible] (Ueber den Begriff [illegible] Prüfung der Röntgen- [illegible] mentaufnahmen sich [illegible] E. Stuertz.
73 *Measurement and Importance of Abdominal Pressure. P. Engelen.
74 Hydrogen Dioxid in Hyperacidity. (Zur medikamentösen Therapie der Hyperazidität.) R. Roubitschek.
75 Case of Traumatic Hysteric Pseudo-Aphasia. T. Becker.
76 Intra-Uterine Fetal Breathing Movements. (Intrauterine Atembewegungen des Foetus.) K. Reifferscheid.
77 Evils of Introduction of Foreign Bodies Into the Uterus to Prevent Conception. E. G. Lick.
78 Gunshot Wounds of Long Bones. (Gelenkschüsse und Schussfrakturen der langen Röhrenknochen im sudwestafrikanischen Feldzug 1904-1907.) A. Franz.
79 Gunshot Wounds of the Abdomen Without Injury of Organs. A. Wagner.
80 Bridging Gap in Urethra with Flap of Fascia. (Ueberbrückung eines ausgedehnten Harnröhrendefektes durch freie Faszienplastik.) F. Hohmeier.
81 Technic for Intravenous Injection of Salvarsan. P. Sonnenberg.

73. Importance and Measurement of the Intra-Abdominal Pressure.—Engelen expatiates on the importance of the intra-abdominal pressure as a factor in various disturbances, especially those of a cardiac neurosis and with arteriosclerosis, etc. The influence of the intra-abdominal pressure on the circulation in the viscera and throughout the abdomen is obvious, as the functioning of the lungs is so dependent on the correct functioning of the diaphragm and this in turn is dependent on the pressure prevailing in the abdomen. To estimate this correctly, Engelen has devised a simple little appliance based on the principle that a thin elastic membrane serving as a wall between two spaces bulges out into the space in which the pressure is lower. When the pressure is exactly alike on both sides of the membrane wall, the membrane stretches straight, without bulging in or out. He uses a large glass bell with thin rubber tissue tied over the mouth of the bell. The bell is placed on the abdomen to which it adheres airtight; the abdominal wall, and the rubber tissue clinging close to it bulge upward slightly into the glass bell. Air is then pumped into the bell until the rubber membrane and with it the abdominal wall are pushed downward by the pressure until they lie flat. The pressure within the bell required to push down the wall until it is flat is recorded by an index fastened perpendicularly in the center of the rubber tissue; the upper end of the index rides up and down in a graduated glass tube projecting downward from the top of the bell. He comments on the fact that while the disturbances resulting from enteroptosis are familiar, those resulting from abnormally high intra-abdominal pressure have been generally overlooked. Unduly high pressure by impeding the excursions of the diaphragm makes respiration shallower and forces extra work on the heart, especially on the right ventricle, while the excessive pressure also hinders normal circulation in the abdominal organs. When the excessive pressure is due to accumulation of fat, abdominal massage and swimming baths have aided in restoring conditions to normal in Engelen's experience. With abnormally low pressure, as with enteroptosis, the use of abdominal binders, electric stimulation of the abdominal muscles and forced feeding all help. In both conditions, gymnastic exercises, abdominal straining, exercises in deep breathing and inculcation of a correct attitude are of prime importance.

Deutsche Zeitschrift für Chirurgie, Leipsic

April, CIX, Nos. 3-4, pp. 205-424

82 Relations Between Hip-Joint Disease and Coxa Vara. (Zur Frage der Coxitis, Coxa vara und sog. Osteoarthritis deformans juvenilis—richtiger Coxa vara capitalis.) R. Levy.
83 Papilloma of the Thyroid. (Zottenkrebs der Glandula thyreoidea.) M. Plessner.
84 Etiology of Inflammatory Stenosis of the Rectum. (Zur Kenntnis der Aetiologie der entzündlichen Mastdarmstenosen.) A. Exner.
85 *Lymphosarcoma of the Tongue. (Beitrag zur Dauerheilung der Lymphosarkome.) J. Schleinzer.
86 Dermoids of Pelvic Connective Tissue. (Zur Kenntnis der Dermoide des Beckenbindegewebes.) L. Arzt.
87 *Roentgen-Ray Examination After Gastro-Enterostomy. F. Härtel.
88 Meckel's Diverticulum. K. Doepfner.

85. Lymphosarcoma of the Tongue.—Schleinzer reports the case of a woman of 54, previously healthy, who suddenly began to experience pains in the neck and difficulty in swallowing, accompanied by the end of two weeks with *fetor ex ore*, copious expectoration and a smarting and burning in the throat. A lump could be palpated in the neck below the angle of the jaw and an ulcer with wall-like edges soon developed on the right margin of the tongue. On the diagnosis of cancer, the glands in the right side of the neck were excised after ligation of the lingual artery; then the lower jaw was temporarily resected and the growth removed. It extended to the epiglottis and arch of the palate. A suspicious enlarged gland on the left side was also excised a few weeks later. The glands showed signs of metastasis, but the patient has had no evidences of recurrence of the lymphosarcoma during the five years to date. The similar cases of sarcoma of the tongue on record are reviewed and compared with this one which seems to be the second case of a histologically verified lymphosarcoma of the tongue and the only one in which the operation proved permanently successful.

87. Radioscopic Examination Years After Gastro-Enterostomy.—An interval of from four months to nearly three years has elapsed since the gastro-enterostomy in the twenty-two cases reported by Härtel from the university surgical clinic at Berlin in charge of Bier, and he gives the Roentgen-ray pictures taken before the operation and soon after and again after an interval of a year or so. This is only about half the total cases of gastro-enterostomy for non-malignant disease done during this period, but late after-examination was not possible in the others. There has been recurrence of trouble in three cases and three other patients were only improved by the operation, but the sixteen others were cured. The details of the cases are given, the monograph filling eighty pages. Radioscopy shows that the stomach evacuation proceeds after a gastro-enterostomy not merely by the laws of gravity but by a kind of physiologic sphincter process. The cases teach further that when the new opening is made on account of anatomic stenosis, it answers the desired purpose completely from the practical point of view. When the stenosis was merely spastic the gastro-enterostomy overcomes the tendency to contraction and the pylorus becomes permeable once more. On the other hand, an ulcer in the middle part of the stomach is not much influenced by the gastro-enterostomy; most of the food still passes out through the pylorus instead of through the new opening. One or more internal courses of treatment for the ulcer should follow every gastro-enterostomy. He regards a gastro-enterostomy as contra-indicated with negative findings as to ulcer or stenosis.

Medizinische Klinik, Berlin

May 14, VII, No. 20, pp. 761-800

89 Physiologic Action of Carbonated Baths. H. Winterberg.
90 Spontaneous Healing of Appendicitis. E. Ruge.
91 Salvarsan in Pregnant and Parturient Women. (Die Salvarsantherapie bei Schwangeren und Wöchnerinnen.) E. Langes.
92 *Resection of Spinal Roots for Gastric Crises in Tabes. (Förstersche Operation bei tabischen gastrichen Krisen.) J. Becker.
93 Vibratory Massage in Treatment of Bronchial Asthma and Allied Conditions. W. Siegel.
94 *Urine Findings with Cancer. (Ueber einen Harnbefund bei Karzinomatösen.) O. Gross and M. Reh.

92. Resection of Posterior Spinal Roots in Tabes.—Förster's operation was done in Becker's case to relieve intolerable gastric crises in a woman of 54 with advanced tabes, the crises returning so often, accompanied by vomiting, that the woman was unable to retain food and was suffering from progressive inanition. The seventh to the tenth dorsal roots were resected on both sides, and the gastric crises never returned afterward, but both legs and the bladder became paralyzed for a time. These symptoms gradually subsided and by the end of three months the patient was restored to the previous condition, except that the gastric pains had been completely cured. The patient lost with them all sense of fulness of the stomach, so that she is liable to eat too much but vomits up the excess afterward. Some after-hemorrhage, compressing the spinal

Policlinico, Rome

May 7, XVIII, No. 19, pp. 585-616

143 *Physiopathology of Atrioventricular Conduction. A. Ceconi.

May, Medical Section, No. 5, pp. 193-240

144 Exploratory Craniotomy for Pathologic Localizations in the Zone of Rolando. G. Finzi.

145 *The Signs of Organic Lesions in Epilepsy. F. Agosti.

143. **Normal and Abnormal Atrioventricular Conduction.**—Ceconi reviews the present status of knowledge in regard to the bundle of His.

145. **Signs of Organic Lesions in Epilepsy.**—Agosti reviews the ten different signs of special deficiency or disturbances in the cordination of movements liable to be observed in epilepsy, the special morbid reflexes, of which he cites eleven types, and the eleven types of phenomena showing involuntary associated movements with the voluntary. He then reviews his own experience with thirty epileptics. In ten there were unmistakable signs of a preceding brain affection, but in eighteen no trace of the kind could be discovered. In five others the epilepsy came on with some morbid condition and subsided with it later; there were no evidences of mental trouble in this group, but such were evident in thirteen other cases in which no causal factor could be discovered. He gives the details of six from this last group; in some the epilepsy was of recent onset and yet no signs indicating an organic lesion in the nervous system could be discovered. In one case the epilepsy developed at puberty and the seizures accompanied the menstrual periods. This patient's father had been a hard drinker and had died at 50 of heart disease.

Riforma Medica, Naples

May 8, XXVII, No. 19, pp. 505-532

146 *Ascites and Collateral Circulation. (Del circolo venoso supplotivo nei suoi rapporti colla comparsa dell'ascite, durante il decorso della cirrosi epatica.) S. Livierato.

147 Epinephrin Lesions of Blood-Vessels and Other Organs. (Studio delle lesioni adrenaliniche dei vasi sanguigni e di altri organi.) G. Vincenzo.

146. **Collateral Circulation in the Cure of Ascites.**—Livierato gives the history of a case of cirrhosis of the liver under observation for fifteen years with necropsy after intercurrent pneumonia. The patient was a man of 43 with much ascites and enlarged spleen but the liver was of normal size. Under restriction to milk, urea and potassium iodid the ascites was spontaneously reabsorbed and he had no further disturbances for nearly nine years, when the dropsy reappeared but subsided again under the same treatment. Necropsy disclosed an extensive deep collateral circulation, the mesenteric veins and others being much enlarged and amply draining away the effusions. The case teaches that ascites is not inevitable with interstitial hepatitis but that it may develop under the influence of an intercurrent pneumonia or other infection, from weakness of the heart, and disappear again as the heart regains tone.

Ugeskrift for Læger, Copenhagen

May 4, LXXIII, No. 18, pp. 631-662

148 *Obesity as Sign of Disease in Hypophysis Cerebri. A. Friedenreich.

148. **Obesity as a Symptom of Hypophysis Disease.**—Friedenreich reports two cases of extreme obesity and discusses the share of the hypophysis in it. The first patient was a woman of 42 who had complained for a year of pain in the head and back of the neck with other symptoms suggesting a tumor near the base of the brain, although there were no signs of restriction of the field of vision. The Roentgen-ray findings also suggested a tumor but necropsy showed that the atrophy of the sella turcica was the result of metastasis in the dura from a tumor in the frontal lobe. The hypophysis itself was not enlarged. The second patient was a young man, an imbecile from birth, very short and extremely obese. There were no indications of myxedema but there were other signs of infantilism and femininism, with hypoplasia of the genitals—all suggesting some disturbance in the functioning of the ductless glands. In eunuchs there is generally increased growth in height, and in only twelve of the thirty-two cases of hypophysis disease with obesity with necropsy findings on record is there any mention of atrophy of the genitals. His patient is in good physical health otherwise, and no changes in the sella turcica are apparent by radioscopy. The data cited, however, confirm the assumption that universal obesity may sometimes point to disease of the hypophysis. Radioscopy may prove misleading as the affection responsible for destruction of the sella turcica may be merely a consequence or complication of disease elsewhere.

Books Received

Books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the *courtesy of the sender.* Selections will be made for review in the interests of our readers and as space permits.

MERCK'S MANUAL OF THE MATERIA MEDICA. A Ready-Reference Pocket Book for the Physician and Surgeon. Containing Names of the Chemicals and Drugs Usual in Modern Medical Practice . . . Therapeutic Uses, *Modes of Administration* and Application, Regular and Maximum Dosage, Incompatibles, Antibodies, Precautionary Requirements, etc.; A Table of Therapeutic Indications, . . . and Miscellany, Comprising Poisoning and Its Treatment; a Comprehensive *Dose Table of Chemicals, Drugs* and Galenicals; Urinalysis and Examination of Urinary Deposits; Approximate Metric Equivalents and Various Useful Tables, etc. Fourth Edition. Cloth. Sent on receipt of 10 cents, in stamps, to physicians or medical students in United States. Pp. 493. New York: Merck & Co., 1911.

THE EYE, EAR, NOSE AND THROAT. Edited by Casey A. Wood, C.M., M.D., D.C.L., Albert H. Andrews, M.D., and Gustavus P. Head, M.D. Volume III, The Practical Medicine Series. Comprising Ten Volumes on the Year's Progress in Medicine and Surgery. Under the General Editorial Charge of G. P. Head, M.D., Professor of Laryngology and Rhinology, *Chicago Post-Graduate* Medical School, and C. L. Mix, A.M., M.D., Professor of Physical Diagnosis in the Northwestern University Medical School. Series 1911. Cloth. Price, $1.50. Pp. 365, with illustrations. Chicago: The Year-Book Publishers.

AMERICAN PRACTICE OF SURGERY. A Complete System of the Science and Art of Surgery. By Representative Surgeons of the United States and Canada. Editors: Joseph D. Bryant, M.D., LL.D., *and Albert H. Buck, M.D., of* New York City. Complete in Eight Volumes. Volume VIII. Cloth. Price, $7. Pp. 1146, with 406 illustrations. New York: William Wood & Co., 1911.

STRUCTURE AND FUNCTIONS OF THE BODY. A Handbook of *Anatomy and Physiology* for Nurses *and Others Desiring a* Practical Knowledge of the Subject. By Annette Fiske, A.M., Graduate of the Waltham Training School for Nurses. Cloth. Price, $1.25 net. Pp. 221, with 83 illustrations. Philadelphia: W. B. Saunders Co., 1911.

AN INQUIRY AS TO AMEBIC DYSENTERY. An Inquiry as to Disturbing the Public Mind. Dysentery Statistics of the Philippine Islands. *Filipino* Emigration to the Terri. [illegible] Some Philippine Diseases. *The* Most Congested [illegible] Known, Five Visayan Islands, P. I. By I. [illegible] Paper. Pp. 46.

EIGHTEENTH AND NINETEENTH ANNUAL REPORTS OF THE BOARD OF MANAGERS AND SUPERINTENDENT OF THE SOUTHWESTERN INSANE ASYLUM, SAN ANTONIO, TEXAS. For Fiscal Years Ending Aug. 31, 1909, and Aug. 31, 1910. Paper. Pp. 118. Dr. J. R. Nichols, Superintendent, 413-414 Scarbrough Building, Austin, Texas.

THE UNCAUSED BEING AND THE CRITERION OF TRUTH. To Which is Appended an Examination of the Views of Sir Oliver Lodge Concerning the Ether of Space. By E. Z. Derr, M.D., Author of "Evolution versus Involution." Cloth. *Price,* $1 *net.* Pp. 110. Boston: Sherman, French & Co., 1911.

MEDICAL REVOLUTION. A Plea for National Preservation of Health Based on the Natural Interpretation of Disease. By Sydney W. Macilwaine, M.R.C.S., L.R.C.P. (Retired). Cloth. Price, 2 shillings 6 pence. Pp. 162. London: P. S. King & Son, Orchard House, Westminster, 1911.

SPIROCHETES. A Review of Recent Work with Some Original Observations. By W. *Cecil Bosanquet,* M.A., M.D., Fellow of the Royal College of Physicians, London. Paper. Price, $2.50 net. Pp. 152, with 90 illustrations. Philadelphia: W. B. Saunders Co., 1911.

EIGHTY-FOURTH *ANNUAL REPORT OF* THE DIRECTORS OF THE GENERAL HOSPITAL SOCIETY OF CONNECTICUT. For the Year 1910. *Presented at the* Annual Meeting, Jan. 26, 1911. Paper. *Pp.* 48. New Haven: The Tuttle, Morehouse & Taylor Co., 1911.

THE EVOLUTION OF URINE ANALYSIS. An Historical Sketch of the Clinical Examination of Urine. Lecture Memoranda, American Medical Association, Los Angeles, 1911. Leather. *Pp.* 248, with illustrations. New York: Burroughs Wellcome & Co.

THE PRINCIPLES AND PRACTICE OF [illegible] By Gwilym G. Davis, M.D., Universities of Pennsylv [illegible] Edition. Cloth. Price, $1 net. Pp. 12[illegible] Philadelphia: P. Blakiston's Son & Co., 1911.

MEMORIAL PAMPHLET. Published by Dr. Shiugo Hashimoto, San Francisco, in honor of his Ancestor Koshoken, an Explorer, Surgeon and Physician of Japan During the *Period of* Seclusion. Paper. In Japanese. *Illustrated.*

THIRTY-THIRD ANNUAL REPORT OF THE DEPARTMENT OF PUBLIC HEALTH, AUGUSTA, GA., 1911. For the Fiscal Year Ending Nov. 30, 1910. Paper. Pp. 80. S. C. Wilson, Secretary, Augusta, Ga.

PROCEEDINGS OF THE CANAL ZONE MEDICAL ASSOCIATION. For the Half-Year, 1910. April, 1910, to September, 1910. Paper. Pp. 150, with illustrations. Dr. John W. Ross, Secretary.

EDUCATION AND PREVENTIVE MEDICINE. *By* N. E. Ditman, *Ph.D., M.D. Paper.* Price, 25 cents. Pp. 73. New York: Lemcke & Buechner, 1911.

ACCESSORY AFTER THE FACT. By William A. Hobday. Cloth. Price, $1. Pp. 153, with illustrations. Boston: C. M. Clark Publishing Co., (1911).

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THE MENINGEAL FORMS OF EPIDEMIC POLIO-ENCEPHALOMYELITIS

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Much has been written about the recent epidemic of poliomyelitis. Attention has been directed to many anomalous and rare types, and our general knowledge of the disease has received a tremendous extension. At the same time, however, not enough emphasis has been laid on certain forms which are probably much more frequent than has been supposed, and which in many individuals run a mild course, and are frequently overlooked, or entirely misinterpreted.

These are the meningeal types. When severe, they are mistaken for epidemic cerebrospinal meningitis, and their occurrence has in large part given rise to the notion that poliomyelitis epidemics follow those of cerebrospinal meningitis. Wickman[1] has discussed this supposed relationship in a thoroughly critical manner. Many are fatal, while again, others may be grouped with the abortive types of poliomyelitis, concerning which latter we have much to learn.

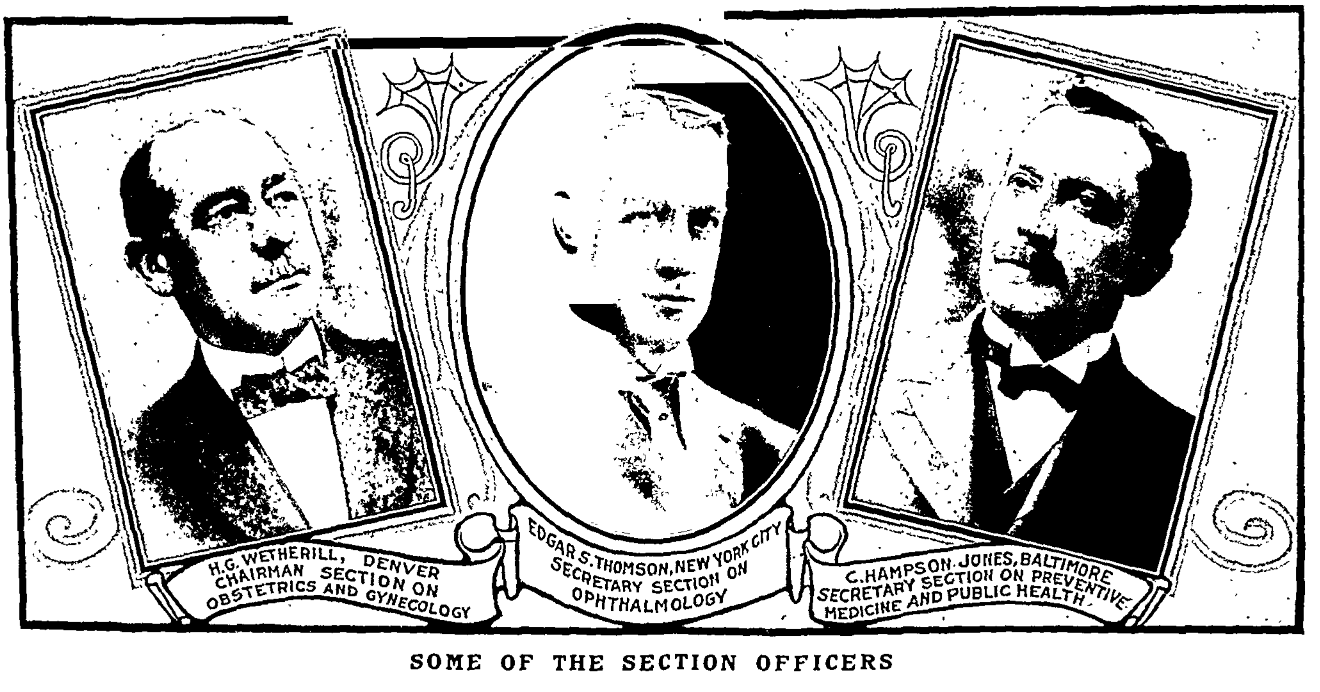
The Report of the Poliomyelitis Committee[2] has little to say regarding the rarer and anomalous types. Being a general report from practitioners, it would not be apt to represent the more intensive study of the disease, as has been done by E. Müller[3] in his recent monograph, or by Wickman[4] in his excellent séries of studies of the Swedish epidemic.

The clinical foundations laid down by Medin in his unusually careful study of the disease have only recently received their full recognition by his fellow countryman Wickman.

The latter author recognizes with reason at least eight fairly definite types of the disease, all of which have come under my observation. These types are as follows:

1. *The Spinal or Poliomyelitic Form.*—This is the usual type with its rich and varied symptomatology.

2. *The Acute Ascending or Descending Types.*—These correspond to the Landry paralysis type, also seen in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[1] Wickman: Bull. et mém. Soc. méd. d. hôp. de Paris, 1909.

[2] Epidemic Poliomyelitis, Report of New York, 1907, Epidemic, Nervous and Mental Disease Monograph, No. 6.

[3] Müller, E.: Die spinale Kinderlähmung, 1910.

[4] Studien über Poliomyelitis, 1905; Ueber die Prognose, Ztschr. f. klin. Med., 1907; Beitrag. zur Kenntnisse der Heine-Medinsche Krankheit, 1907; Ueber die akute Poliomyelitis, Jahrb. f. Kinderh., 1908; Sur les prétendues relations entre le poliomyélite, etc., Bull. et mém. Soc. méd. d. hôp., 1909; Weitere Studien, Deutsch. Ztschr. f. Nervenkr., 1910; Ueber akute Poliomyelitis und Polyneuritis, Ztschr. f. d. ges. Neurol. u. Psychol., 1910; 82 Versamml. d. Königsberg, 1910; Die akute Poliomyelitis, Handbuch der Neurol., 1911.

some hydrophobias and certain neuritides, and which are usually, though *not invariably, fatal.*

3. *The Bulbar or Pontine Forms.*—In these the bulbar or pontine nuclei are most prominently affected. Here belong *many central facial palsies, isolated eye palsies,* palsies of the larynx and pharynx. Many of the fatal cases are such because of the medullary involvements. Medin and Oppenheim, *respectively, have studied* the bulbar and pontine forms.

4. *The Encephalitis Form.*—Strümpell has studied this type in particular. While apparently rare in our New York epidemic, nevertheless it occurred.

5. *The Ataxic Form.*—This is usually a predominantly cerebellar type, and has been seen in only a few instances.

6. *Neuritic or Neuritis-Like Form.* — This is an admittedly difficult type to diagnose, but inasmuch as neuritis is usually rare in children—excepting diphtheria —its occurrence at the time of an epidemic should throw light on the diagnosis.

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7. *The Meningitic Form.*—This will form the subject-matter of this short communication.

8. *The Abortive Forms.*—Wickman roughly estimates that these constitute 15 to 20 per cent. of all the cases, and Müller regards them as occurring more frequently than all the other forms. If Müller's position be true, we have an intensely practical problem before us. It will be imperative for us to devise rapid and accurate methods of diagnosis of these abortive cases if an epidemic is in progress, and prophylactic measures must be put into operation to prevent the spread of the disease through these abortive cases. That they can be the direct means for the *communication* of the disease has been abundantly proved by most modern students of the disorder, more particularly by Wickman and by Müller.

THE MENINGITIC FORM

In epidemic poliomyelitis of the spinal type the spinal and cranial meninges are almost invariably affected. This one fact has come out with striking prominence in all of the recent studies. The notion that the disease is a toxemia affecting the anterior horn cells, taught by Charcot and repeated in our text-books, must be absolutely *dismissed.* Poliomyelitis is an acute infectious disease with *a meningomyelitis as its most fundamental* pathologic foundation.

Hence, practically all of the patients will show some signs of meningeal involvement in their early stages. Irritative phenomena of the spinal nerves, with hyperesthesia, *tenderness, irritability,* restlessness, etc., are the most frequent signs of this spinal meningitis, whereas *photophobia,* hyperacusis, headache, somnolence indicate the implication of the cerebral meninges.

Those patients, however, who show much more marked meningeal symptoms than spinal, and in whom both exist, with greater prominence of the former, may be said to be suffering from the meningeal form of the disease.

SYMPTOMS

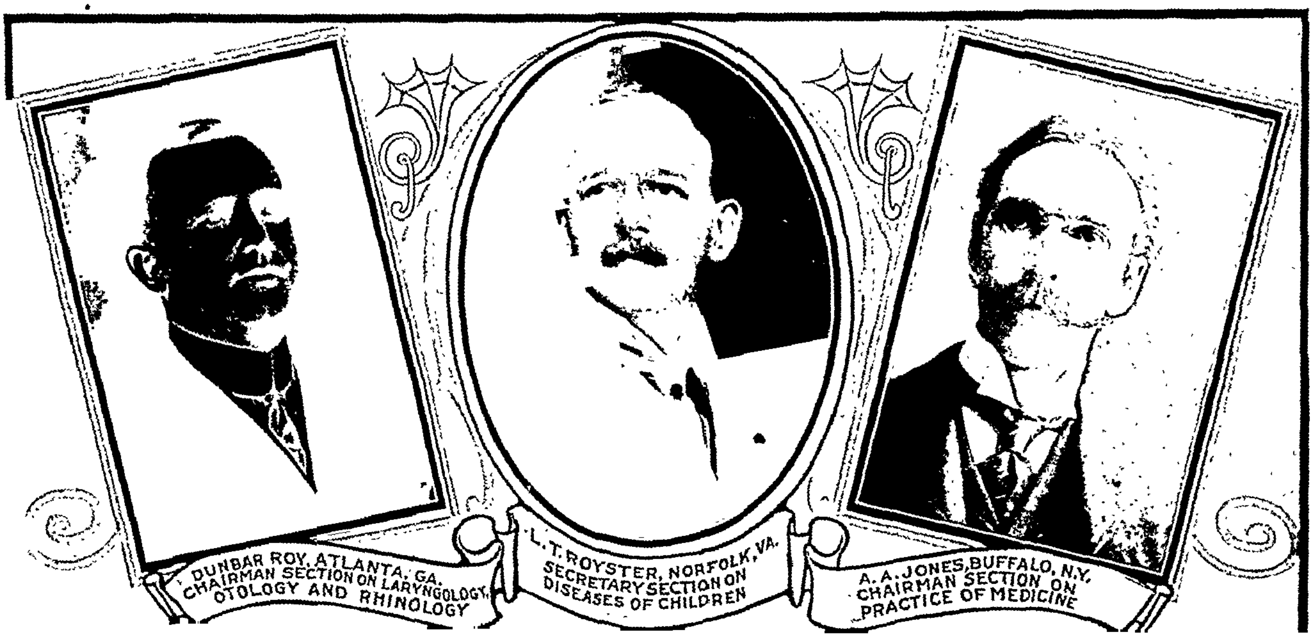
The chief *signs in the meningeal forms* vary, in their *initial stages, from those of the spinal type,* only in the matter of greater severity. There is headache, nausea and vomiting, slight photophobia with hyperacusis, pains in the neck and back, stiffness of the neck, rigidity of the muscles of the vertebral column, opisthotonos of milder or severe grade, Kernig's sign, tonic or clonic convulsive movements; somnolence and even unconsciousness. The temperature runs a non-characteristic course.

While in the ordinary spinal type the disease develops in classical fashion, in the meningitic form it may recede rapidly, and beyond the possible occurrence of transitory or permanent eye palsies nothing remains. In some cases death ensues with the development *of stormy* symptoms.

In the Vienna epidemic of 1908-1909, Spieler observed *at least eight meningeal forms* in a series of forty-four cases; in four of these the picture resembled tuberculous meningitis so very closely as to be diagnosed only late in the disease. Spieler describes some of his cases in a very characteristic manner. The cases very frequently have a comparatively lengthy prodromal period, with beginning change in mood, fatigue, nightly unrest with frequent outcries, occasional vomiting with *obstipation,* suggestive of a beginning basilar meningitis. Then, in children, convulsions suddenly occur, marked stiffness of the neck, irregular pulse, Kernig's sign, increasing patellar reflexes which usually diminish later, facial pareses, strabismus, general hyperesthesia, vasomotor disturbances and atypical facies cerebralis. At this period the lumbar puncture will show lymphocytosis, but no purulent exudate. In the favorable cases the symptoms then begin to recede, the temperature falls to normal, the irritative phenomena diminish, and there may develop a number of the palsies characteristic of the spinal form.

Netter found the meningitic form comparatively frequent in the Paris epidemic, and it is not at all unlikely that in the epidemic of cerebrospinal meningitis of 1905-6 in New York many cases of poliomyelitis went under the guise of a meningitis.

The following case history is representative of a group of cases which have been observed by me in the recent epidemic. I am indebted to Dr. F. C. Lewis of Lakewood for the privilege of seeing the patient in consultation.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CASE REPORT

History.—The patient, Mrs. H. C., aged 29, a healthy, strong woman, mother of three healthy children, had been perfectly well all summer. August 31 she was attending a county fair in upper New York. Toward the latter part of the afternoon she began to feel tired, found it difficult to walk, and complained of a severe headache. On the way home from the fair she was very tired. Notwithstanding some headache the patient slept fairly well that night on arriving at home. The next day she felt ill, was very dizzy, had some nausea and vomiting, and toward evening noted that she could not see so well as formerly. She had severe headache, her neck felt very stiff, she had nausea and vomiting and considerable hyperesthesia. The next day she saw double, was very dizzy, could not stand up, was nauseated and vomited, had much pain in the head and back of the neck and was very stiff in the neck and shoulders. The bladder and rectum were uninvolved. She was first seen by Dr. Lewis, Sept. 4, 1910. She then had grown steadily worse. The temperature was 100 F., pulse 120, small and regular. The headache was intense, chiefly suboccipital. There was a marked nystagmus, and palsy of the external rectus.

Examination.—I saw the patient the next day. She was then confined to bed, had a severe headache, head painful on percussion, and on movement. She was nervous and irritable, had marked photophobia, hyperacusis, some lethargy and drowsiness. The temperature was 102 F., pulse 120. Examination of the cranial nerves was negative, save in the following particulars. The movement of the eyes to the right was limited: the left eye was in a slightly external and upward position, and the left eyelid showed slight ptosis, and moved slowly. There was distinct nystagmus. There was distinct miosis, and the pupillary light and accommodation reactions were markedly diminished. The pupils were almost immobile. There were no other palsies, save at times a slight flattening of the right nasolabial fold. The upper extremities showed no atrophy, hypertrophy, spasm or hypotonus. The reflexes were present and equal, and there were no sensory disturbances. The trunk showed no abnormalities, the reflexes were present. The lower reflexes showed no anomalies save weakness, slight diminution in the knee-jerks, the left being absent, and no sensory disturbances. No positive Kernig. The vomiting had ceased.

Course of Disease.—The day following the temperature had dropped to normal, and improvement began. There was some loss of power of convergence, and the patient's attempts to look at her nose—and also psychic attempts to look at close objects—developed nystagmus.

September 7, pains and nystagmus had diminished; eye palsies about the same. There was muscular twitching this day and thereafter, and marked dizziness on looking downward.

From September 8 to 12 improvement was gradual. The head remained heavy but did not ache. The temperature remained normal. She still had diplopia and occasional nausea and vomiting.

September 16, the patient was able to be up and about for a time. She was easily fatigued. The ocular palsies were somewhat improved but still remained evident. Vision was normal for either eye alone.

Whereas the chief palsies here belonged to the oculomotor group, the appearance of the patient strongly resembled that of a meningitis patient. It was at first thought that this was the disorder, since it was learned that about seven to ten days previously the family had been visited by a male acquaintance who had been visiting a family across the mountain, four miles distant, where there were reported to be two children suffering from epidemic cerebrospinal meningitis.

Later investigation revealed that the children had poliomyelitis, being *two links in the chain of epidemic* extension of this disease in its ascent up the Hudson river and Champlain valleys.

The diagnosis, I believe, was one of the meningeal forms of poliomyelitis, the permanent or semipermanent palsies being those of the mid-brain. Had it not been for the marked meningeal signs one could just as well arrange it with the mid-brain types so well written on by Williamson, or the oculomotor types described by Stephenson.

THE URINE IN A CASE OF ACROMEGALY

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In a female patient suffering from well-marked and typical acromegaly of four years' duration, a constant excretion of creatin has been observed. The excretion varied from a minimum of 52 mg. to a maximum of 500 mg., the average excretion being between 100 and 150 mg. a day. The great variation in the amount of daily excretion is undoubtedly largely due to the impossibility of obtaining satisfactory twenty-four-hour samples, the patient being up and about during the whole period of observation.

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TABLE 1.—TOTAL DAILY OUTPUT OF NITROGEN, CREATININ AND CREATIN

Date	Diet	Quantity in 24 Hours, c.c.	Total N, gm.	Creatinin, mg.	Creatin, mg.	Creatin, % of Total Creatinin
2/2	Bread and milk..	630	7.258	380	105	21.68
2/3	Bread and milk..	660	8.767	343	112	24.61
2/6	Bread and milk..	980	.....	559	500	47.21
2/7	Bread and milk..	385	.....	385	104	21.27
2/8	Bread and milk..	425	.....	391	86	18.03
2/22	Full diet	1,170	9.589	866	164	15.92
2/23	Full diet	585	4.011	369	87	19.08
2/24	Full diet	1,040	6.811	572	52	8.32
2/25	Full diet	1,010	7.000	626	111	15.06
2/26	Full diet	800	7.200	544	176	24.44
2/27	Full diet	900	3.843	333	63	15.91
2/28	Full diet	765	5.076	434	91	17.31
3/1	Full diet	2[illegible]0	2.977	287	80	21.80
3/2	Full diet	600	3.990	462	*	.....
3/20	Full diet	1,250	.....	463	399	43.97
3/23	Full diet	500†	.....	375	120	25.00

* Not estimated. † Six-hour sample.

The daily output of total nitrogen, creatinin and creatin is given in Table 1. The creatinin and creatin were both *determined by the Folin method;* total nitrogen by the Kjeldahl method.

From these figures it can be seen that there was a constant excretion of creatin during the period in which the patient was under *observation; that* this excretion, while not constant, tended to constitute about 20 per cent. of the total creatinin determined, and that the average output was not influenced by the change from a bread-and-milk to a full diet.

Three determinations of the distribution of the total nitrogen excreted were also made, the first two with the patient on a bread-and-milk, the third on full diet. The results are given in Table 2. The only abnormalities noticed are the low figures obtained for creatinin and the apparent tendency to a high value for the undetermined nitrogen.

The observation of the excretion of creatin in a case of acromegaly seems particularly interesting in view of the recent finding by Krause[1] of a constant excretion of creatin in human diabetes mellitus and in phlorhizin glycosuria in dogs. Krause is inclined in these cases to associate the excretion of creatin with the deprivation of carbohydrates *in the food, a condition* which Cathcart[2] has shown leads to creatin in the urine. Cushing[3] has recently drawn attention to the close relation of the secretion of the posterior lobe of the pituitary gland to the storage of carbohydrates. The frequency of glycosuria in acromegaly, a condition resulting probably from the hyperactivity of this gland, has long been known. In our patient there was, however, no lack of carbohydrate in the food, nor was there apparently any diminished tolerance for *carbohydrates, the* ingestion of 100 gm. of glucose on two occasions leading to no appearance of sugar in the urine.

Other conditions in which creatin has been discovered *in the urine are* starvation, carcinoma of the liver, pro-

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[1] Krause, R. A.: The Excretion of Creatin in Diabetes, Quart. Jour. Exper. Physiol., 1910, iii, 289; Jour. Physiol., Proc. Physiol. Soc., July 9, 1910.

[2] Cathcart, E. P.: Jour. Physiol., 1910, xxxix, 311.

[3] Cushing, H., and Goetsch, E.: Am. Jour. Physiol., 1910, xxvii, 60.

John B Murphy

PRESIDENT AMERICAN MEDICAL ASSOCIATION, 1911 1912.

gressive muscular dystrophy and pregnancy. All these conditions, except the last, are associated with varying degrees of emaciation and loss of muscle-tissue, which may well be the cause of the creatinuria. My patient, during the two months she has been under observation, does not appear to have lost weight, but, on the contrary, is, in her own opinion, stouter.

TABLE 2.—DISTRIBUTION OF TOTAL NITROGEN EXCRETED ON A BREAD-AND-MILK DIET AND ALSO ON A FULL DIET

Date	Diet	Amount, c.c.	Total N. gm.	Urea N.	N as NH_3	Uric Acid N.	Creatinin N.	Undetermined N.
2/2	Bread and milk..	940	7.258	5.705 gm. 77.76 %	0.309 gm. 4.21 %	0.151 gm. 2.05 %	0.204 gm. 2.79 %	0.889 gm. 12.39 %
2/9	Bread and milk..	980	8.767	7.467 gm. 85.16 %	0.455 gm. 5.19 %	0.194 gm. 2.22 %	0.177 gm. 2.02 %	0.474 gm. 5.23 %
2/22	Full diet	1,170	9.589	7.405 gm. 77.22 %	0.654 gm. 6.80 %	0.255 gm. 2.65 %	0.322 gm. 3.36 %	0.953 gm. 9.97 %

Benedict and Myers[4] have pointed out the possibility of the changing of creatinin into creatin by the action of bacteria in the urine. As I had already found in this urine organisms capable of changing nitrates into nitrites and hippuric acid into benzoic acid and glycocoll, I thought it possible that the presence of creatin was due to such a bacterial action. Such an origin for the creatin was, however, eliminated, as samples of the urine incubated at 35 c. for twenty-four hours showed no increase in the creatin present, nor did inoculation with the patient's urine and subsequent incubation produce creatin in creatin-free urine.

There was also found in the urine of this patient a reducing substance, the nature of which I have as yet been unable to determine. This substance reduces Nylander's solution in a typical manner, Haines and Fehling's atypically. It does not ferment and never yields an osazone. The orcein and phloroglucin reactions are negative, as is also Bial's test for pentoses. On several occasions a furfurol reaction was obtained, but this was never sufficiently strong to justify the assumption that the reduction was due to glycuronic acid compounds. The reducing substance is completely precipitated by basic, partially by neutral lead acetate. On extracting the urine with ethyl acetate it entirely disappears, neither residue nor distillate showing any reduction. The urine is faintly levorotatory.

Whether the excretion of creatin in acromegaly is a constant occurrence, and what its significance may be, remains, of course, still to be determined. I have, however, thought its occurrence in this one case worth recording.

I wish to express my thanks to Dr. Graham Chambers for his kindness in allowing me to examine the urine of his patient, and to Prof. J. B. Leathes, under whose direction this work has been carried on. The clinical excerpts of the case will be reported independently.

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[4] Benedict, F. G., and Myers, V. C.: Am. Jour. Physiol., 1908, xviii, 397.

A CASE OF PRIMARY ENDOTHELIOMA OF THE GREAT OMENTUM *

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The occurrence of primary sarcoma of any form in the omentum is so rare that Bonamy and Bonamy[1] in 1908 were able to collect reports of but sixteen well-authenticated cases. In these, eleven of the tumors were spindle-celled, one was round-celled, three were myxosarcomata and one a fibrosarcoma. Cobb[2] two years earlier had been able to collect reports of fourteen cases, four of which were not in the list given by the Bonamys. Since then reports by Conforti[3] (four cases), Marcialis,[4] Lichkus[5]

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* Presented before the Pathological Society of Philadelphia, March 23, 1911.

[1] Bonamy, R., and Bonamy, E.: Rev. de gynéc. et de chir. abd., 1908, xii, 283.

[2] Cobb: Ann. Surg., 1906, xliv, 16.

[3] Conforti: Centralbl. f. allg. Path., 1906, xvii, 817

[4] Marcialis: Riforma med., 1909, xxv, 1328.

[5] Lichkus: Russk. Vrach, 1909, viii, 39.

can be compressed by the fluid and the degree of compression can be ascertained from the scale. Pressure from the cuff is exerted on the fluid at *A*, which causes the fluid at *B* to rise until the air-pressure in the tube *C* is equal to the pressure in the cuff. This pressure may be then read off on the scale.

The bulb *A* acts as a reservoir for the fluid, while the bulb *D* acts as a reservoir for the compressed air, allowing the liquid to rise the entire length of the tube in recording pressures up to 300 mm. of mercury. These two bulbs allow of the use of a larger and hence more accurate scale than if straight tubes were used.

The rest of the apparatus is as simple as possible.

1. The cuff consists of a cloth reenforced rubber bag 12 cm. wide, closed by three rapid adjustable straps. A metal plug joins the bag with the rubber tubing.
2. The pump consists of an 8-ounce Politzer bag.
3. A metal "T" tube with stop-cock and needle-valve escape for gradually releasing the pressure. The stop-cock allows the air-pump to be disconnected, giving direct communication between the cuff and the instrument.
4. The rubber tubing is heavy enough to prevent any loss of pulsation by distention of the rubber.

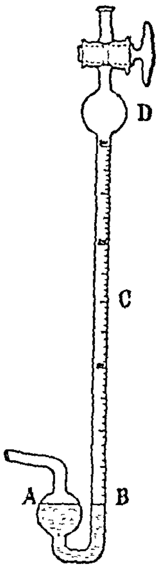

Fig. 2.—Diagram showing the glass tube of the water sphygmomanometer. A, bulb partially filled with water on which pressure is exerted by a column of air in the tube leading from the cuff. B, level of water in upright calibrated tube C, which contains air above. D, bulb in the tube C to contain the air as the water rises. At the top of the tube is a cock for closing the tube after the water is put in below.

The advantages of the instrument are:

1. Sensitiveness. A few c.c. of water constitute the only moving part; hence there is practically no inertia. The transmission of the pulse-wave is immediate and its character is unchanged. Irregularities of the pulse are readily seen and the pulse-force may be estimated. Systolic pressure can usually be read off directly by merely watching the change in pulsation of the fluid as the pressure is gradually lowered. Furthermore, by feeling at the wrist the pulse can be sooner detected by feeling the first few throbs occurring synchronously with the pulsation in the tube. Higher, but more accurate, systolic readings are thus obtained. Similarly, the diastolic pressure can be obtained by observing at what pressure maximal pulsations occur in the tube.
2. Simplicity. Air and water constitute the only moving parts. There is nothing to wear out, hence the apparatus is permanent.
3. Accuracy. Each manometer is individually calibrated against a mercury manometer.

103 West Eighty-First Street.

Heredity, Growth and Decay.—"Heredity is a reality, but is not so definite or so mechanical as is generally supposed. Nutrition is responsible for much that passes for heredity. Only after its effects have been definitely ascertained can the real mechanism of heredity be understood. Why, for example, does each organism reach maturity and finally sink into old age? Is there a determent in the germ cell that when active checks growth? Does the mechanism of life run progressively to a certain point and then refuse to act? Or is maturity merely a state of maximum nutrition and old age a running down because nutrition fails? To state the problem in another way: Does a given organ cease to grow because the possibilities of its inherited mechanism have become exhausted, or does growth end because nutrition fails when the energy of the organism is turned in other directions? The latter is, I believe, the sounder view." (From Patten's "The Social Basis of Religion," New York, 1911.)

THE COMBINED USE OF TENTS AND INTRA-UTERINE MEDICATION

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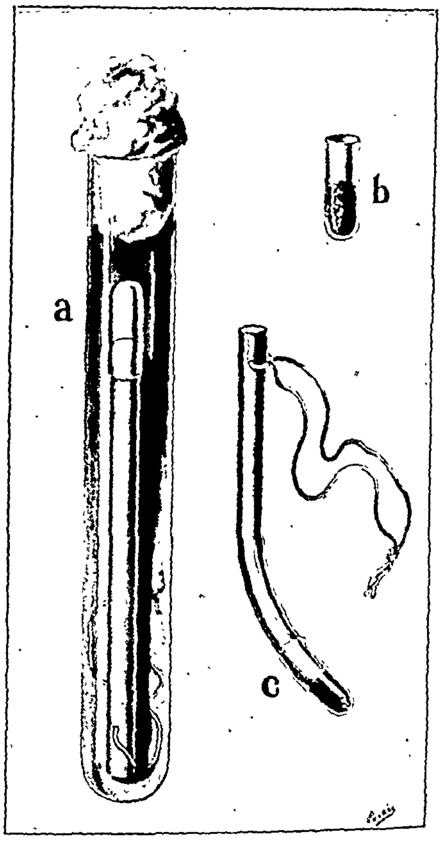
Dilatation of the uterus by means of tents and treatment by intra-uterine applications made up a very large part of the gynecologic therapeutics of a former generation. Both of these measures have fallen into almost universal disuse; the tent, although of great diagnostic and therapeutic value, having been discarded because of the frequent disabling, not to say, fatal metritis, salpingitis, and peritonitis, which, even under the most careful and judicial handling, occasionally followed its use. The old routine intra-uterine applications as used in the office or in the patient's house were condemned, not only because they were generally useless, but also and more especially because they were dangerous and sometimes destructive. Since these measures have been relegated to the dark ages of gynecology, we have for the most part put in place of them forcible dilatation by means of steel instruments, and curettage under anesthesia. Forcible dilatation popularized by our late fellow, Goodell, and others, undoubtedly has wide usefulness when used with care and judgment. Even in the hands of the incompetent and careless practitioner it will be less hazardous than the old routine treatment, because it rises to the dignity of a surgical operation and is, therefore, presumably always undertaken with aseptic conditions and because it is not so frequently repeated. Forcible dilatation is transient in its effect, and, therefore, not always adequate; furthermore, if carried far enough to permit intra-uterine digital touch, which is often desirable, serious rupture of the uterus might result. The intra-uterine application of iodin or other substances usually, since it does not reach thoroughly the uterine mucosa, especially the uterine glands, gives disappointing results. Any measure, therefore, that will safely prolong the dilatation and bring the application effectively in contact with the mucosa and muciparous glands should be of value.



Device for prolonged dilatation of the uterus in conjunction with thorough intra-uterine medication: *a*, a tupelo tent with gelatin half-capsule attached kept sterile in a test-tube; *b*, a gelatin half-capsule, containing two parts of potassium iodid and one part of iodin crystals; *c*, a curved tent on the distal end of which has been placed the half-capsule containing iodin one part and potassium iodid two parts, this being soluble in water.

The sole purpose of this paper is to describe a simple means which has the double purpose of relatively safe prolonged dilatation of the uterus by means of tents and in conjunction therewith thorough intra-uterine medication. The device consists in the use of a tupelo sponge or sea-tangle tent over the distal end of which has been attached half of a gelatin capsule filled with whatever medicinal substance may be desired for intra-uterine application.

The diagram, with its explanation, shows, first the sterile tent over the end of which has been placed the gelatin half capsule. The tent should be kept sterile in a test-tube stopped with cotton until used. The drawing shows also another tent slightly curved to facilitate introduction and a half-capsule partly filled with a medicinal substance. Any form or size of tent may be used.

It is perhaps well to lay stress on the necessity of thorough disinfection of the tent and of keeping it aseptic until used. In my service at St. Luke's Hospital the tents are exposed to a heat of 240 F. on two consecutive days and again to the same degree of heat before using.

There is a possible defect in the iodin tent as above described, that is, in the gelatin capsule which, although subject in the manufacture to considerable heat, is not aseptic and may be a source of infection. The difficulty may be practically and perhaps wholly obviated by placing the half-capsule filled with iodin on the end of the tent two days before it is to be introduced; then the iodin permeates the capsule and renders it probably safe.

The only medicinal substance I have used so far is a combination of iodin crystals, one part, and potassium iodid, two parts, this being a proportion which dissolves readily in water. Therefore, after introduction, the expanding tent stimulates uterine secretions which dissolve, first, the capsule, and second, the iodin and potassium iodid, making at once a prolonged application to the endometrium; at the same time the iodin permeates the tent and renders it continuously antiseptic. Should the half-capsule not hold enough iodin other half capsules may be filled and placed each over the end of the preceding capsule until a sufficient quantity has been secured.

This iodin combination dissolves readily in less than one-half its weight of water; therefore, the uterine secretions stimulated by the tent are quite sufficient to effect a solution. The solution, like Churchill's caustic solution, undoubtedly would have a very escharotic effect and might, if applied, cause stenosis of the uterine ends of the Fallopian tubes. It is also possible that if the tubes were open uterine contractions might force it into the tubes with possible disastrous cauterization. Such an accident evidently would be more likely to occur in consequence of the cervical canal being tightly plugged by the tent. I have not applied more than three or four grains of this combination and would hesitate to increase this amount except in case of a very flabby hemorrhagic uterus. Manifestly it might be desirable to dilute the iodin combination in such a way as to insure the mucosa against destructive action. Such a dilution could be made with magnesium silicate, that is, talcum powder, this being comparatively an inert substance with which the iodin combined would have no chemical reaction.

This procedure is more efficacious than the obsolete one of passing an applicator armed with medicated cotton into the uterus. The explanation is, first, in the conjunction of prolonged dilatation and the continuous application of the medicinal substance; second, this application is made during a period when the uterine wall is thinned by dilatation, and the muciparous glands are correspondingly shortened and opened, and, therefore, are more accessible to treatment.

I suggest a trial of this method in such cases of uterine catarrh, uterine hemorrhage, dysmenorrhea, and sterility as may furnish an indication for dilatation and intra-uterine application. For obvious reasons it should not be undertaken at the office, but should be surrounded by all the safeguards of a surgical operation in the patient's house, or preferably in the hospital. The iodized tent may be introduced as a supplement to the forcible dilatation with steel instruments under anesthesia, in which case a somewhat larger tent may be used. If no general anesthetic is given, I suggest the following technic:

1. Cleanse the vagina to a degree as near sterilization as may be practicable.
2. Introduce into the uterus an applicator wound with absorbent cotton saturated with a 10 per cent. solution of cocain. Ten minutes usually will suffice for practical local anesthesia.
3. Carefully and moderately dilate the uterus by means of a Palmer or very small Goodell dilator.
4. Introduce the tent.
5. In about twelve hours remove the tent and follow it by a larger one if additional dilatation is desired.

In the older experience of dilatation by means of tents the dangerous infections usually followed the use of the second or third tent, seldom the first. Under aseptic conditions one might safely apply two tents in immediate succession; but if more dilatation were required I would advise it to be begun forcibly under anesthesia and then continued by one or two tents.

My estimate of the value of the device is based for the most part on general principles. I have used it only a few months and, therefore, cannot report the remote results in concrete cases. In one case a moderate pelvic inflammatory reaction followed which subsided in a few days apparently without serious results. This case serves to emphasize the necessity for extreme care in the use of any method of uterine dilatation and intra-uterine application.

I make no extreme claim relative to the value or safety of the method I have described. So far I have found it quite satisfactory. I offer it in a tentative way, hoping it may prove useful in selected cases as a supplement or a substitute for the more radical forcible dilatation. At any rate, it is about all I have been able to rescue from the ancient wreck of routine intra-uterine therapeutics, which filled a large and melancholy place in the gynecologic therapeutics of the last century.

Uterine dilatation by means of tents fell under merited condemnation before the time of antiseptic and aseptic surgery. Perhaps under modern conditions it may be found that the danger was dependent not on the tent itself, but on the unclean conditions in which it was applied. Comparing the relative value of the earlier tent dilatation with the later forcible dilatation by means of steel instruments, and eliminating the septic results which so frequently followed the use of the tent, which now possibly we may avoid, it is more than possible that forcible dilatation might suffer by comparison; clearly, it might be well to give the latter method a fair trial under the favorable conditions of antisepsis and asepsis.

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TRAUMA AS A CAUSE OF AMYOTROPHIC LATERAL SCLEROSIS

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The following cases have been studied with a view to estimating the correct relation of the trauma which in each case preceded the symptoms of amyotrophic lateral sclerosis.

Case 1.—I examined a mechanic, aged 44, in the dispensary of the University Hospital in 1909. Five years before that date he had fallen 12 feet and injured his back sufficiently to keep him in a hospital for two months. After four years of normal health he caught his right hand in the machine which he tended, badly tearing the soft tissues, and again was forced to spend two months in a hospital. On resuming work, he immediately felt that the injured hand was weak, awkward and easily fatigued. The lameness and ensuing atrophy spread up the limb to the shoulder, so that within twelve months the right upper extremity was nearly useless, while the left hand had begun to show the early symptoms of the disease. The picture of amyotrophic lateral sclerosis rapidly developed and the patient died early this year with bulbar paralysis.

Case 2.—A railroad engineer recently in Professor Soiller's service at the University Hospital attempted just a year ago, after a day's work, to jump on a moving train. He lost his grip and for a moment was in danger of being killed; but by a great effort he regained his hold and managed to get on the car. He lay for the rest of the two-mile run much agitated and violently trembling in his legs. Next day, however, he was able to walk and returned to work, and for two weeks all went well. Then he felt stiff and sore in the muscles of the lower limbs, and this condition progressed as time passed. Five months later, again while returning home from work, he tripped on a cross-tie and fell on a bridge, striking his left shoulder as he passed through, finally lighting on a girder five feet below. He was able, nevertheless, to draw himself back to the track and to walk home. The next day he felt dizzy and nauseated. After a few days, weakness and lameness developed in the left arm, followed by atrophy, the symptoms increasing from day to day until by October, 1910, the patient was forced to give up work. He has now the cardinal symptoms of amyotrophic lateral sclerosis.

Among the records at the Philadelphia General Hospital I find but few case histories in which the diagnosis of this disease has been made. Among the symptoms in several cases of spinal muscular atrophy are recorded spasticity of the legs, and some cases of lateral sclerosis showed muscular wasting in the arms. In two out of the whole list accident had preceded the disease:

Case 3.—Two years before onset the patient had fallen from a moderate height. His first discomfort was a stinging paresthesia in the toes, felt several months after the injury. Later general muscular wasting appeared, together with spasticity of both legs.

Case 4.—The patient five months before the onset had fallen from a height of 25 feet and been rendered unconscious.

Case 5.—The case reported by Dr. George Price[1] happens to be exactly apposite. A middle-aged acrobat made a false step and sprained one ankle. Shortly afterward he sustained a slight injury from a fall. Within a short time muscular wasting appeared with some stiffness and slightly exaggerated tendon reflexes in both legs.

Gelma and Strochlin in a report[2] on this subject tell of a workman who received a severe strain of the vertebral column while trying to support a 700 kg. stone which was slipping from the hold of a derrick. He felt weakness at once. Stiffness and atrophy succeeded and the disease went on to bulbar paralysis within three years.

Kirk Mendel[3] discusses the etiologic relation of trauma to amyotrophic lateral sclerosis, and reviews the cases reported up to that time. A patient of his, a woman, had fallen from a height of ten feet, striking her left side. Seven months later she again fell, this time from a hay-wagon, bruising her left breast. Two months later marked fatigue was felt, followed by numbness of the left upper extremity and atrophy. The symptoms were earliest and throughout most marked in the left upper extremity.

Valentiner's patient showed symptoms shortly after a fall during a violent athletic effort. Goldberg tells of a workman who fell on his buttocks from a scaffolding, and whose right foot was crushed by an after-falling tool-box. The symptoms started in the right foot and were always more severe in the right leg. Hauck's patient received a deep cut in the left forearm and right leg, and here also the injured limbs showed earliest and most severe signs of the disease. The man reported by Ottendorf had hung suspended by arms and chin for several minutes from a beam. Seven months later the disease commenced in the arms and progressed to bulbar palsy. Pagenstecher almost duplicates this history, except that his patient showed immediate symptoms. An electric shock preceded the onset in a 6-year-old boy examined by Hoehl. Oppenheim, in his text-book on nervous diseases, tells of a man who after an accident on the water was compelled to row violently to save his life.

Gowers[4] deals with spinal muscular atrophy and amyotrophic lateral sclerosis without distinction. In a few cases, he says, he has known the complex to develop after a concussion "as if it had set up a perverse nutrition of the nerve elements. Still more rarely a fall injuring one limb has been followed by muscular atrophy commencing in this limb."

Amyotrophic lateral sclerosis has been reported as following parturition.

It thus appears that many patients in whom this relatively rare spinal degeneration has occurred refer it back to some kind of trauma. If these accidents had been of the slight kind which most workmen suffer every year or so, the question of causal relation might be dismissed. But the injuries were in each case unusual, so that it is difficult to dismiss them as mere incidental antecedents. Mendel calls attention, as did Gowers, to the fact that the disease often develops first and persists most markedly in the injured member, or if not in the same limb, then on the same side of the body. In Mendel's opinion the interval elapsing between injury and early symptoms is sufficiently constant to merit consideration.

Many writers on this disease do not even mention trauma as an etiologic factor. Winterscheid thinks it possibly a proximal cause, and this is Mendel's conclusion, who feels that some congenital defect must be invoked to explain the tendency to the degeneration. The question comes up, What is there about the circumstances attending such accidents that could thus operate on the spinal cord? Two possible mechanisms suggest themselves. If the blood-supply to certain tracts and cells were congenitally precarious, a severe concussion might completely cut off part or all the nutrition of the parts involved. It must also be remembered that violent exertion usually accompanies the accidents above described, and, as Edinger has suggested in regard to tabes dorsalis, overfunctioning might undo an already weakened tract. In the various forms of professional neuritis overstimulation of nervous cells is the most obvious cause of the changes in structure.

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[1] At the session of the Philadelphia Neurological Society at which this paper was read.

[2] Gelma and Stroehlin: Gaz. d. hôp., March 23, 1911.

[3] Mendel, Kirk: Umfall in der Aetiologie der Nervenkrankheiten, Berlin, 1911.

[4] Gowers: Text-Book on Nervous System, i, 473.

Before attempting to reach a conclusion from these cases as to the causative value of trauma, there is another possible relationship between the disease and the accident that is worthy of consideration. The accident might be the result of the disease. A mechanic whose hand was gradually losing its wonted deftness through an incipient central degeneration in the cervical cord one day fails to remove his hand in time from his machine; an engineer, unconscious as yet of weakness in hand and leg, tries the muscles too far in the effort to jump on a moving train. The workman whose stiffness has not shown itself in ordinary walking has the defect painfully emphasized when a slight misstep throws him from a beam in midair. Siccard in discussing one of the cases above reported took a non-committal position because he could not decide from the evidence that the preexisting disease had not caused the trauma.

Patients suffering from any insidious disease are apt to overlook the early dawning of their trouble. Close questioning often enables the physician to place the onset weeks or months earlier than the patient had dated it. Very often, too, the patient assigns some unusual event as the starting-point, or even as the cause, of his illness—explaining malaria as a result of a wedding; or apoplexy, of a comet. If patients with half of each retina totally blind can walk the streets and do daily work for months oblivious of the defect until a collision with a street-car calls it to their attention, it is not hard to believe that slight, incipient lateral tract disease may escape notice until it produces sufficient awkwardness of movement to cause an accident.

The gradually developing maladroitness would be accentuated by weariness and thus increase the liability to mishap at such times. Furthermore, rest, such as is enforced for a period after the accident, would render the beginning motor defect less noticeable, while resumption of work after the immediate effects of the injury had disappeared would fix attention on the injured member and call into prominence its defect in power and dexterity. This accounts for a somewhat definite period that elapses between the trauma and the early symptoms supposed to result from it.

But after giving due weight to this reversal of causative relationship, and having subtracted all cases in which uncertainty remains, a certain number of cases lie before us in which no agency in producing the accident can be charged to the patient himself. The trauma acting on parturient women, the electric shock received by the boy, and the injuries received by the member first striking the ground, in patients who fell from buildings, cannot be charged to preexistent disease in the sufferers. Here we must conclude either that the trauma called forth the disease, or that the trauma preceded it merely as a chance antecedent. The attendant circumstances in some of the cases are such as to make the theory of chance improbable, though a much larger number of cases must be presented before it can be definitely eliminated.

The histories here presented admit, therefore, of one conclusion: A reasonable presumption exists, but no definite proof, that trauma is a proximate (evoking) cause of amyotrophic lateral sclerosis. If previously weakened cells and tracts exist in the spinal-cord, severe concussion or over-innervation (strain) can become the last straw that shatters the structure. Possibly congenital defect will some day be shown to be the ultimate cause (*causa sine qua non*) predisposing to the breakdown.

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SALVARSAN

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I. PREPARATION FOR INTRAVENOUS ADMINISTRATION

The cells of every living organism are adjusted to a certain osmotic tension and any variation of this tension in the fluids surrounding the cell injures it; therefore, the concentration of solutions of salvarsan injected intravenously is a matter of some importance. The practice seems to be to dissolve the salt in a variable amount of water and then to neutralize with sodium hydroxid, the exact osmotic tension of the resulting solution being a neglected factor. This is then brought up to a volume of 200 or 300 c.c. by adding, in some cases, physiologic salt solution, and in others distilled water. The statement is frequently made that 0.6 gm. of salvarsan neutralized and dissolved in 250 c.c. of distilled water approaches closely the osmotic tension of the fluids of the body. The fallacy of this can easily be shown.

We ordinarily accept a solution of sodium chlorid containing 9 gm. of the salt to one liter of distilled water as most nearly approaching physiologic osmotic pressure. The molecular weight of a given salt expressed in grams is said to be one "gram molecule." The molecular weight of sodium chlorid being 58.5, that amount of this salt, expressed in grams (58.5 gm.), dissolved in one liter of water is one "gram molecule," or, as suggested by Ostwald, 1 "mol." Any fraction of 58.5 gm. of sodium chlorid dissolved in a liter of water is that fraction of a mol. Consequently physiologic salt solution has an osmotic pressure of 9÷58.5, or 0.15 mol. Thus we see that any solution intended for intravenous administration in order to be physically harmless must have a concentration of 0.15 mol.; the number of grams to the liter must be expressed by the formula, "0.15 × molecular weight of the dissolved salt."

Salvarsan as an acid salt ($HCl.NH_2.OH.C_6H_3.As:As.C_6H_3.OH.NH_2.HCl$) has a molecular weight of 421. For its complete neutralization with NaOH two HCl radicles are dropped and two atoms of Na are substituted for two atoms of H, thus giving a salt of less molecular weight—412. When a given amount of a salt with a molecular weight of 421 is changed to another salt with a molecular weight of 412, a proportionate loss in grams must at the same time take place. When 0.6 gm. of the acid salvarsan is used, 0.58 gm. of the sodium salt results. In this reaction, however, two molecules of NaCl are liberated. Using the above figures it can be seen that the amount of NaCl in this solution is 0.16 gm.

Supposing this reaction takes place in a liter of water, the osmotic tension of the resulting solution can be summed up as follows:

$$\text{For salvarsan } \frac{.58}{410} = .0014 \text{ mol.}$$

$$\text{For NaCl } \frac{.16}{58.5} = \frac{.0027 \text{ mol.}}{.0041 \text{ mol.}}$$

Knowing the molecular concentration of a given amount of these two salts dissolved in a liter of water to be .0041 mol., we compute the amount of water necessary to hold the same salts in a solution of 0.15 mol. (the osmotic tension required) as follows:

$$\frac{.0041}{.15} = .027 \times 1000 = 27 \text{ c.c.}$$

As isotonic solutions have the same freezing-point, this solution should theoretically freeze at 0.56, the freezing-point of the blood.

An ampulla of salvarsan was dissolved in distilled water, 4.4 c.c. normal sodium hydroxid added, and the resulting clear solution brought up with water to a volume of 27 c.c. The freezing-point of this was found to be 0.50. This variation from the theoretical can perhaps be partly explained by dissociation of the salt, and by the fact that, purposely, as is commonly the practice, the ampulla was not washed out to remove the small remaining powder adhering to it.

This error, however, becomes negligible when the volume is increased to 200 or 300 c.c. by the addition of an isotonic fluid such as physiologic salt solution.

Thus, the volume of a solution containing 0.6 gm. of salvarsan prepared for intravenous administration should approximate 25 to 35 c.c. in order to approach physiologic osmotic pressure. This considers only the physical, not the pharmacologic properties of the drug, and a consideration of the latter causes us to greatly increase the volume by the addition of an isotonic solution of some other salt.

II. THE IDENTITY OF THE WATER-SOLUBLE SODIUM SALT

It is commonly supposed that the following reactions take place in the preparation of salvarsan for intravenous administration:[1]

1. $HCl.NH_2.OH.C_6H_3.As:As.C_6H_3.OH.NH_2HCl + 2\ NaOH = NH_2.OH.C_6H_3.As:As.C_6H_3.OH.NH_2 + 2\ NaCl + 2\ H_2O.$

2A. $NH_2.OH.C_6H_3.As:As.C_6H_3ON.NH_2 + 2\ NaOH = NH_2.ONa.C_6H_3.As:As.C_6H_3.ONaNH_2 + 2\ H_2O.$

For 0.6 gm. of salvarsan in Formula 1, 0.114 gm. of NaOH would be required; that is, 2.8 c.c. normal sodium hydroxid solution.

To redissolve the salt, as expressed by Formula 2A. it is manifest that the same amount of sodium hydroxid would be required, using 5.6 c.c. for the entire process (1 and 2A). As a matter of fact, less is found to suffice.

Notwithstanding the known unstability of such a monosodium salt, it would appear that in place of 2A, the following occurs:

$H_2.As:As.C_6H_3OH.NH_2 + H_2O.$

2B. $NH_6.OH.C_6H_3.As:As.C_6H_3.OH.NH_2 + NaOH = NH_2.ONa.C_6$

Supposing that Formula 2B expresses the true reaction, one-half the amount of alkali used in Formula 1 would be required for this second reaction, i. e., 1.4 c.c. normal sodium hydroxid, or 4.2 c.c. in all. In practice 4.3 c.c. to 4.5 c.c. normal sodium hydroxid is actually used to precipitate the neutral and redissolve the sodium salt; which suggests the formation of a monosodium salt as in Formula 2B.

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[1] The Journal A. M. A., Dec. [illegible], 1910.

THE PRODUCTION OF ANTIBODIES TO PNEUMOCOCCI IN AN INSUSCEPTIBLE HOST *

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With the pneumococcus, as with most bacteria, the bulk of immunologic studies has been made with animals possessing a relatively high susceptibility to that organism. On the other hand, the general studies concerning the formation of antibodies have shown that specific antibody production is not directly dependent on any pathogenic value of the substance injected: Thus the precipitins to innocuous proteins; the agglutinins and hemolysins, to red blood-corpuscles; and, indeed, certain antitoxins themselves, namely, those resulting from toxoid injections, are all produced by the employment of antigens having no disease-producing power.

Starting from this point, I have tested the possibility of obtaining antibodies to pneumococci and their products, by the systematic inoculation of a relatively insusceptible animal with extreme doses of virulent pneumococci. The animal selected for this purpose was the common barn-yard fowl, birds in general being insusceptible to pneumococcus infection.

The pneumococci employed in the following experiments were from a human lung involved in acute lobar pneumonia. Throughout the period of immunization, the pneumococci were transferred each third day to fresh blood-agar (rabbit) slants. From time to time, the organism was passed through mice and rabbits, the virulence not being allowed to drop below the point at which a single inoculation of rabbits produced death. For convenience in obtaining large quantities for inoculation, the organism was grown on blood-agar slanted in flasks, the twenty-four hour growth equalling by count the number of organisms growing on twenty test-tube slants in the same time.[1] From the surface of each twenty-four-hour slant the organisms were washed by employing 5 c.c. of 0.85 per cent. sodium chlorid and the several suspensions were brought together immediately prior to inoculation. In all instances the growths were checked for contaminations. All inoculations were made intramuscularly into the breast, very slowly.

The following protocol gives the history of the inoculation of Fowl D, a white Leghorn rooster, weighing 2,000 gm.

INOCULATIONS OF FOWL D.

I. July 9, 1910: Received 60 c.c. emulsion of pneumococcus R'M", containing twenty-four hour surface growth of twelve flasks (=240 tubes).

II. July 16: Received 60 c.c. emulsion from twelve flasks (=240 tubes).

III. July 17: Received 30 c.c. emulsion from six flasks (=120 tubes).

IV. July 26: Received 85 c.c. emulsion from seventeen flasks (=340 tubes).

V. August 23: Received 80 c.c. emulsion from sixteen flasks (=320 tubes).

VI. August 30: Received 80 c.c. emulsion from sixteen flasks (=320 tubes).

VII. September 11: Received 40 c.c. emulsion from eight flasks (=160 tubes).[2]

VIII. October 11: Received 90 c.c. emulsion from eighteen flasks (=360 tubes).

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* From the Department of Pathology and Bacteriology, the University of Chicago.

[1] Direct counts showed approximately 1,000,000,000 organisms in each such tube and 20,000,000,000 in each flask. These figures correspond closely to those for the streptococcus given by Weaver and Tunnicliff, Jour. Infect. Dis., 1908, v, 589.

[2] Relatively small inoculation given because of marked progressive emaciation resulting from previous injections.

IX. November 12: Received 100 c.c. emulsion from twenty flasks (=400 tubes).

X. December 12: Received 100 c.c. emulsion from twenty flasks (=400 tubes).

XI. Jan. 15, 1911: Received 100 c.c. emulsion from 20 flasks (=400 tubes).

XII. February 3: Received 80 c.c. emulsion from fifteen flasks (=300 tubes).

As indicated above, Fowl D received twelve inoculations of pneumococci, the inoculations being distributed over a period of eight months, and representing 180 flask cultures (=3,600 tubes). Following each of the first two injections, there was a period of about twelve hours during which the animal was distinctly sick, and a similar but longer period (thirty-six hours) occurred immediately following the eighth injection. Throughout the immunization there was a progressive loss of weight. Other than for this, the animal appeared normal at all times.

February 20, or seventeen days subsequent to the final inoculation, the animal was bled to death, and the serum recovered for a series of tests as to its antibody content.

The bacteriolytic, agglutinating and bactericidal powers were tested as follows: An emulsion of the homologous strain of pneumococci was so made that each cubic centimeter represented the growth of two twenty-four hour blood-agar test-tube slants. One c.c. of the emulsion was added to each of five tubes of two series. To each of the tubes of one of the series, were added also decreasing amounts of normal fowl serum; to the tubes of the other series were added the corresponding amounts of the serum from Fowl D. The tubes were incubated at 39° C. for two hours, and then allowed to stand at 12° C. for eighteen hours. The readings given in Table 1 were made at the end of that period.

TABLE 1.—SHOWING RESULTS OF TESTS OF BLOOD-SERUM OF FOWL D FOR ITS BACTERIOLYTIC, AGGLUTINATING AND BACTERICIDAL POWERS, WITH CONTROL TESTS

1 c.c. of Serum Dilution Used.	1 c.c. of Pneumococcus Emulsion in Each Tube.—	
	(a) Serum of Normal Fowl.	(b) Serum of Fowl D.
1/5	Cloudy—no agglutination	Clear—no sediment.
1/25	Cloudy—no agglutination	Clear—agglutinated sediment.
1/50	Cloudy—no agglutination	Somewhat cloudy—sediment.
1/125	Cloudy—no agglutination	Cloudy — agglutina (?).
1/250	Cloudy—no agglutination	Cloudy—no agglutination.
Control without serum.	Cloudy—no agglutination	

Table 1 shows that Serum D, in contrast to the normal serum, produced distinct changes of the bacterial suspension. These changes are to be interpreted as caused by bacteriolysin and agglutinins. Immediately following the readings above recorded, the contents of each of the tubes of the two series was injected into a white mouse (15 gm.) to test the lethal action of the several mixtures. Table 2 gives the results of the inoculations.

TABLE 2.—RESULTS OF INOCULATIONS IN WHITE MICE WITH THE CONTENTS OF THE TUBES IN TABLE 1

Mouse Receiving Emulsion Containing Serum; Dilution Used.	(a) Normal Serum Series.	(b) Serum D Series.
1/5	† Within 36 hours.	Lived; no distress.
1/25	† Within 36 hours.	† Between 60 and 62 hours.
1/50	† Within 36 hours.	† Within 36 hours.
1/125	† Within 36 hours.	† Within 36 hours.
1/250	† Within 36 hours.	† Within 36 hours.
Control; emulsion containing no serum.	† Within 36 hours.	

In Table 2 and the following tables, the dagger (†) stands for "died."

Table 2 shows that in contrast to the normal fowl serum, the immune serum, when present in sufficient concentration, modified or destroyed the lethal action of the pneumococci for mice.

Following this demonstration of the action *in vitro* of the immune serum on pneumococci, tests were made as to its action *in vivo.* To standardize the dosage for these tests, preliminary experiments were made as follows: The twenty-four-hour growth of pneumococci from one blood-agar flask was suspended in 5 c.c. of salt solution and this suspension was tested in duplicate, as to its lethal action for mice (Table 3).

TABLE 3.—RESULTS OF INOCULATION OF MICE WITH PNEUMOCOCCUS EMULSION TO STANDARDIZE THE DOSAGE

1 c.c. Pneumococcus Emulsion; Strength.	Mice Weighing Approximately 15 Gm.	
	(a) Series I.	(b) Series II.
Full	† After 36 hours...	† After 35 hours...
1/10	† After 35½ hours.	† After 36 hours.
1/50	† After 36 hours...	† After 38½ hours.
1/75	† After 39 hours...	† After 40 hours.
1/100	† After 46½ hours.	† After 47 hours.
1/150	† After 95 hours...	† After 104 hours.
1/300	Lived	Lived.
1/600	Lived	Lived.

These experiments indicated the approximate dosage for mice. The results showed that 1 c.c. of a 1/100 dilution of the suspension as prepared, served to kill mice within forty-eight hours; that the same amount of a 1/150 dilution killed only after four days; and that smaller doses were non-lethal. Further to test the forty-eight-hour lethal dose, however, a suspension similar to that used above was prepared from a second twenty-four-hour flask-culture of the same strain and this was tested on mice as follows: six mice were injected with 1 c.c. of a 1/100 dilution, and an equal number with 1 c.c. of a 1/150 dilution. All six mice receiving the 1/100 dilution died within forty hours, while all those receiving the 1/150 dilution survived three and one-half days or longer.

The above results showed that for the pneumococcus, as then growing, the forty-eight-hour lethal dose was approximately 1 c.c. of a 1/100 dilution of the standard suspension. On the basis of this dosage, the therapeutic value of the immune serum D was tested. This test was performed in triplicate, and consisted of two procedures. These procedures were, (1) the injection of the immune serum into mice coincidently with an inoculation with 100 times the forty-eight-hour lethal dose of pneumococci, and (2) the injection of the immune serum eighteen hours subsequent to the bacterial inoculation. All experiments in which there was an injection of the immune serum, were duplicated by controls in which normal fowl serum was substituted for the immune serum. In no instance did the normal serum display a protective action. The immune serum displayed a distinct protective action in all instances. Following is the protocol of the experiments:

Standard suspension of pneumococci was made as in previous experiments and employed undiluted in 1 c.c. doses, representing 100 times the forty-eight-hour lethal dose.

GROUP I (Control).—Each of two mice received 1 c.c. of the emulsion + 1 c.c. of salt solution, and each of two other mice received 1 c.c. of emulsion + 1 c.c. normal fowl serum; with results as shown in Table 4.

TABLE 4—RESULTS OF CONTROL INOCULATION OF MICE WITH PNEUMOCOCCUS SUSPENSION, NORMAL FOWL SERUM AND SALT SOLUTION

Mouse.	1 c.c. Pneumococcus Suspension + 1 c.c. Normal Fowl Serum.
Red head	† In 20½ hours.
Red neck	† In 21 hours.
	1 c.c. Pneumococcus Suspension + 1 c.c. Salt Solution.
Red back	In 23½ hours.
Red tail	In 22½ hours.

GROUP II.—Coincidently with the above injections each of three mice received 1 c.c. of the suspension subcutaneously and at once 1 c.c. of immune serum D in same site. Three control mice received the same inoculation, but with normal serum in place of the immune serum. These controls all died within twenty-four hours. The mice receiving the immune serum survived as shown in Table 5.

TABLE 5.—RESULTS IN MICE RECEIVING 1 C.C. PNEUMOCOCCUS SUSPENSION AND AT ONCE 1 C.C. IMMUNE SERUM

	Time After Inoculations.				
Mouse.	10 Hrs.	23 Hrs.	42 Hrs.	67 Hrs.	3 Wks.
Red l. ear	Slightly sick	Normal	Normal	Normal	Normal.
Red r. ear	Slightly sick	Normal	Normal	Normal	Normal.
Red ears	Slightly sick	Normal	Normal	Normal	Normal.

Three controls distinctly sick; all three †.

GROUP III.—Coincidently with the above inoculations, each of three mice received 1 c.c. of the pneumococcus suspension subcutaneously and eighteen hours later, when very sick, received the first of a series of subcutaneous injections of immune serum D, three control mice receiving normal fowl's serum. All died within twenty-four hours after inoculation. The course of the infection in the mice receiving the immune serum was as shown in Table 6.

TABLE 6.—MICE RECEIVING 1 C.C. PNEUMOCOCCUS SUSPENSION AND SUBSEQUENTLY IMMUNE SERUM

	TIME AFTER PNEUMOCOCCUS INOCULATION							
Mouse.	18 Hours.	26 Hours.	30 Hours.	32 Hours.	44 Hours.	50 Hours.	64 Hours.	4 Days.	20 Days.
Red head and neck.	Very sick, flat on belly. Given 1 c.c. immune serum.	Running about jar and jumps when touched. Possibly a little slow in movements, but otherwise normal.	Now somewhat sick. Has been growing less active.	† Received in all 1 c.c. serum.					
Red head and back.	Very sick and stirs but little; flat on belly. Given 1 c.c. immune serum.	Same as mouse above; apparently normal.	Same as mouse above. Given 1.5 c.c. immune serum.	Again apparently normal; running about jar.	Seems somewhat sick; only fairly active. Given 1 c.c. immune serum.	Seems sick; flat on belly much of time and quiet.	† Received in all 3.5 c.c. serum.		
Red head and tail.	Very sick; flat on belly. Given 1 c.c. immune serum.	Same as mouse above; apparently normal.	Also has become sick again, as above mice. Given 2 c.c. immune serum.	Apparently normal; running about jar.	In very good condition, but possibly a little sick. Given 2 c.c. immune serum.	Not sick, but moving about jar; jumps when touched.	Not sick; is possibly a little sluggish, but seems normal and eats well. Given 1 c.c. immune serum.	Perfectly normal.	Has remained perfectly normal. Received in all 6 c.c. serum.
3 control mice	All very sick. Given 1 c.c. normal serum.	All † within 24 hours.							

The above experiments show that the immune serum D in contrast to normal fowl serum possessed a distinct protective power against the pneumococci inoculated. In those instances in which the serum was injected coincidently with the organisms, the protection was complete (Group II). In those instances (Group III) in which the serum was injected after the mice were definitely sick, the protection was marked; and in the one instance in which the serum treatment was pushed in an attempt to actually save the mouse, the protection was complete. It is to be noted that the length of survival of the mice of Group III was directly proportional to the amount of serum injected: The three controls without serum, died within twenty-four hours; the mouse receiving 1 c.c. of immune serum died after thirty-two hours; the mouse receiving 3.5 c.c. of serum died after two and two-thirds days; and finally, the mouse receiving 6 c.c. of serum recovered completely. In all, four of the six mice receiving the immune serum, were saved; and the life of the remaining two was lengthened. Equally striking was the temporary, but almost immediately beneficial, influence of each injection of the immune serum. It must be realized that the mice of Group III were practically moribund (within six hours of death, as indicated by the controls) when given the first injection of serum; within a short time, after the initial injection of the immune serum, however, they were apparently normal, running about the jar, and jumping away when touched. The same rapid recuperation occurred in the case of the two mice receiving the second injection of serum.

I am well aware that contentions have heretofore been made concerning an efficient serum producing immunity to the pneumococcus under experimental conditions. In general, however, the evidence has been inconclusive, in that the dose of organisms used in the inoculation has been relatively small, or the serum has been injected before the infection was definitely established, or that the host employed in the test was one of relatively slight susceptibility to the pneumococcus, and the possibility of spontaneous recovery, therefore, not eliminated. In the present instance it is to be emphasized that a very highly susceptible species was inoculated with 100 times the acutely lethal dose, and that in the therapeutic test the animals protected were prostrated with the infection prior to the first injection of serum.

My conclusions are that it is possible by inoculation of fowls with extreme doses of pneumococci to obtain a serum with specific antibodies and possessing distinct protective action against pneumococci within certain hosts.

Work now in progress, which is corroborative of the above results, will be reported at a later date.

THE THERAPEUTIC EFFECT OF HIGH NITRATES IN DRINKING-WATER *

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LAWRENCE, KANSAS

In the course of an examination of the waters brought to this laboratory some are occasionally found which are suspected by the owners of the wells to have peculiar properties, from the fact that they seem to produce diuretic effects on strangers using the water. In every case these suspicious waters have been found to be high in nitrates.

Formerly it was supposed that the organic substances held in solution in water had an injurious effect *per se*, but at the present time nitrates in a water in the absence of nitrites and considerable amounts of free ammonia are considered to indicate that the agents in nature that purify a water have done their work, and that all nitrogenous organic matter has been oxidized to a harmless condition, so that an unfavorable environment for pathogenic organisms has been set up. From the observations which follow it seems probable that this process of oxidation in water may be carried on to such an extent that the nitrates themselves may reach such quantities as to have a disagreeable effect, to say the least, on the system.

The authorities[1] state that the diuretic action of potassium nitrate and sodium nitrate is well known, and a special diuretic action has been attributed by many writers on therapeutics to the nitrate ion itself. In summing up this subject Sollmann says:

> The action is essentially a salt action. This appears to produce more specific irritation, which must be referred to the ion. The former is explained by its ready penetration and being foreign to the animal body; the latter is asserted on mucous membranes and results in gastritis at the place of entrance and in diuresis.

The dose prescribed by most writers is 0.30 gm., given as potassium nitrate in very dilute solution, an added action being affected by the potassium ion.

In well-waters which seem to have caused this marked diuretic effect, an excess of nitrate was found. The results of the examination of eight waters, the history of whose action was obtained at first hand, are given below.

TABLE 1.—EXAMINATION OF EIGHT WATERS FOR NITRATES

Specimen	Source	NO_3 equivalent to KNO_3 Gm. per liter
1	Tecumseh	0.288
2	LaCygne	0.346
3	Lawrence	0.433*
4	Lawrence	0.462*
5	Lawrence	0.382
6	Lawrence	0.361
7	Baldwin	0.346
8	Lawrence	0.505

* Complete analysis.

TABLE 2.—ANALYSES OF SPECIMENS 3 AND 4 *

Specimen 3		*Specimen 4*	
NaCl	0.0825	NaCl	0.2970
$NaNO_3$	0.3272	$NaNO_3$	0.2487
KNO_3	0.0438	KNO_3	0.1556
$NaHCO_3$		$NaHCO_3$	0.0978
$CaSO_4$	0.2813	$CaSO_4$	0.9301
$CaCO_3$	0.0916	$CaCO_3$	0.1167
$MgCO_3$	0.1031	$MgCO_3$	0.2157
SiO_2	0.0328	SiO_2	0.0178
Fe_2O_3 Al_2O_3	0.0036	Fe_2O_3 Al_2O_3	0.0042
Total solids	0.9659	Total solids	2.0836

*Results are expressed in grams per liter, and the constituents are calculated to the most probable combinations.

By a glance at the tables it will be seen that a person drinking one gallon of water a day, would, by a conservative estimate, receive approximately four doses of nitrate, and although the maximum diuretic effect might not be reached, it is possible that a marked irritation would be set up. It is true that the system might adjust itself to this continued irritation after a time, although in at least two of the cases in which this kind of water has been used for many years, the effect is still noticed.

Sample 1, Tecumseh, Kan.—In this case the patient always on returning home from a protracted stay noticed the very marked diuretic effect produced by the water.

Sample 2, La Cygne, Kan.—In this case the man after years of absence from home returned, and on taking up the drinking of this water noticed a marked diuretic action and at times gastritis.

Sample 3, Lawrence, Kan.—Four students attending the university had rooms where this water was used as the only source of drinking water. All noticed a marked diuretic action with almost constant irritation.

Sample 4, Lawrence, Kan.—An elderly woman who lived for two weeks at the place where this water was used, and alternately two weeks in the country, noticed that this water whenever she began to use it had a marked diuretic action, sufficient, in fact, to make it decidedly inconvenient. This woman's husband has also had kidney trouble for years.

Sample 5, Lawrence Kan.—A physician stated that he suspected that this water, taken from a well at his home, might be the cause of a continual desire to pass urine.

Sample 6, Lawrence, Kan.—Two young men rooming at this place complained that the water was causing a marked diuretic action.

Sample 7, Baldwin, Kan.—A farmer moving to the farm where this well was located, complained that his whole family had, since beginning the use of this water, been afflicted with "kidney trouble."

Sample 8, Lawrence, Kan.—A family of six persons who were continually using this water complained of the great inconvenience which it caused, on account of the difficulty experienced in retaining their urine. Two members of the family were afflicted with chronic kidney trouble. After an examination of the water was made, on the advice of their family physician, they were immediately placed on distilled water, and a marked improvement was shown within a very short time. One member of this family is afflicted with chronic gastritis. After the city water was used in the house the whole family soon reached a normal condition.

In this paper I have not attempted to claim definitely that the amount of nitrates present was the absolute cause for the physiologic conditions mentioned above.

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* Read before the American Chemical Society, Kansas City Section.

[1] Sollmann: Action of Nitrate Ion, Text-Book of Pharmacology, p. 565. Patten: Materia Medica—Diuretics, KNO_3; Butler: Materia Medica and Therapeutics—Diuretics, KNO_3; Cowperthwaite: Materia Medica, p. 385.

The evidence, however, seems to point very strongly to this conclusion. I very much hope that these facts will be brought to the attention of some one who has an opportunity for physiologic experiments on water-drinking, and that this may lead the way to experiments that will show definitely whether or not nitrates in water can reach a proportion sufficiently great to be in themselves harmful.

THE DIAGNOSTIC SIGNIFICANCE OF THE URINARY METHYLENE-BLUE REACTION WITH SPECIAL REFERENCE TO MALIGNANCY

PRELIMINARY REPORT

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AND
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In searching for the presence in the urine of abnormal products of elimination in cases of malignant disease, we observed that methylene-blue was decolorized by the urine taken from these patients. Repeated examinations and more extensive investigations demonstrated that urines in cases of rheumatism, nephritis, meningitis, etc., were also sometimes decolorized, but generally to a minor and variable degree. In most instances the latter conditions could be easily differentiated and eliminated, so that it appears as if this reaction may have considerable value in the diagnosis of malignant disease.

It is for this reason deemed justifiable, at this early stage, to make this brief preliminary report, so that other observers may investigate the value of this test by experimenting on a larger number of cases.

So far, this test has been positive in every well-established case of malignant disease. Many of these cases have been corroborated by operations and post-mortem and pathologic diagnosis. Though this test is not specific for malignant disease, occurring as it does with great constancy, particularly in pregnancy, also sometimes in nephritis, rheumatism, meningitis and in other conditions, it has proved already of considerable practical value in the diagnosis of malignant disease. As this test is extremely simple, and as no special apparatus or skill is required, it can be readily and quickly carried out by anybody anywhere. The decided and striking change of color leaves no doubt as to the presence or absence of the reaction.

TECHNIC OF TEST

Methylene-blue—we generally use 3 to 5 drops of Löffler's methylene-blue—is added to a test-tubeful of fresh urine; sufficient anilin dye is used to give it a decided blue color. The urine is shaken and then allowed to stand at room temperature for from twelve to twenty-four hours. A control fresh specimen of normal urine similarly treated is made. At the end of said time the blue color of the urine disappears; the upper layer, however, which is in contact with the air, still remains more or less blue. The control specimen, on the other hand, remains unchanged, retaining its uniform blue color.

More detailed investigations have already been instituted so as to further augment the scope of this test. For many tests made we have to thank the interns of the following hospitals: Dr. C. Breitman of the Brooklyn Jewish Hospital, Dr. W. Phipard of the Long Island College Hospital and Dr. C. R. Hutchins of St. Catherine's Hospital.

The accompanying table illustrates the above points.

URINARY METHYLENE-BLUE REACTIONS

No. of Cases.	Diagnoses.	Positive.	Negative.
34	Carcinoma (well established)	34	0
1	Sarcoma (well established)	1	0
5	Tumor (type unknown)	5	0
1	Fibroid?	0	1
1	Intraligamentous cyst	0	1
1	Hydatid cyst of liver	0	1
1	Small glandular swelling of breast	0	1
2	Hodgkin's disease	2	0
1	Banti's disease	0	1
23	Pregnancy (all cases in late stage)	22	1
1	Incomplete abortion	0	1
16	Post partum	6	10
3	Miscarriage	2	1
2	Complete abortion	0	2
2	Pyelitis of pregnancy	0	2
1	Post-partum sepsis	0	1
5	Nephrolithiasis	3	2
11	Nephritis	4	7
4	Hematogenous infection of kidney	3	1
3	Uremic coma and chronic nephritis	1	2
3	Chronic catarrhal gastritis	0	3
7	Gastric ulcer	0	7
2	Pyloric ulcer with induration	1	1
4	Duodenal ulcer	0	4
1	Intestinal ulcerations	0	1
1	Amebic dysentery	0	1
2	Enteroptosis with excessive peristalsis	0	2
1	Peritonitis	0	1
2	Chronic catarrhal colitis	0	2
2	Appendicitis	0	2
1	Catarrhal jaundice	0	1
11	Cholelithiasis	0	11
1	Acute cholecystitis	0	1
1	Chronic cholecystitis	0	1
1	Cholecystitis and mitral stenosis	0	1
4	Acute endocarditis	2	2
4	Pericarditis	0	4
3	Senility with arteriosclerosis	2	1
1	Acute bronchitis	0	1
17	Lobar pneumonia	1	16
3	Empyema	1	2
22	Articular rheumatism	1	21
1	Gonorrheal rheumatism	0	1
6	Typhoid fever	0	6
2	Brill's disease	1	1
2	Influenza	0	2
1	Pyemia	0	1
4	Diabetes (two with gangrene)	2	2
1	Gout	0	1
1	Encephalitis	1	0
5	Tuberculous meningitis	2	3
1	Anterior poliomyelitis	1	0
1	Temporal neuralgia with mitral stenosis	1	0
2	Acute salpingitis	0	2
1	*Bilharzia hæmatobia* (bladder)	0	1
1	Hernia	0	1
2	Hemorrhoids	1	1
5	Lacerated cervix and perineum	1	4
70	Various surgical conditions other than malignancy	0	70
19	Disease not determined	4	15
26	Normal urines	0	26
363			

In most cases other than those of malignancy in which the test was positive, it became negative usually in subsequent examinations, as the condition from which the patient was suffering improved.

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A CASE OF STRANGULATED HERNIA PRESENTING UNUSUAL SYMPTOMS

JAMES R. JUDD, M.D.
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Patient.—A Chinaman, aged 64, a laborer, for the past fifteen years had been troubled by a rupture which had gradually increased in size. On several occasions there had been difficulty in reducing the contents, but he had always finally succeeded. He had never used a truss. Four days previous to his admittance to the hospital, the swelling had increased in size and he had been unable to reduce it. He had suffered considerable pain. The bowels had moved once. According to the patient's statement, which was corroborated by that of his friends and relatives, he had not vomited at all.

Physical Examination.—The patient was a fairly well-nourished man: pulse was 120; temperature 101; respiration embarrassed. The abdomen was greatly distended and tympanitic. The right inguinal region showed a tense, tender swelling involving the right side of the scrotum. The skin over the swelling was reddened and edematous. There was no impulse on coughing. Rectal examination was negative.

Operation.—The usual incision disclosed a tense sac adherent to scrotum and containing a loop of gangrenous intestine, and the cavity of the sac filled with fluid feces. Gas and fecal material were seen to be escaping from two openings in the bowel. The sac was irrigated, the constriction relieved, and the gangrenous bowel wrapped in moist gauze. The loop of intestine was then brought well outside of the abdominal cavity and the distended bowel divided at a safe distance above the gangrenous area. This division allowed the escape of a large quantity of fluid feces and considerable gas. The gangrenous intestine 12 cm. in length was removed, together with a wedge-shaped piece of mesentery, and an end-to-end anastomosis effected with sutures. The spermatic cord was found to be flattened out by pressure and pulsation was absent in the vessels. The right testis was greenish-black in color and did not bleed on incision. Accordingly the cord was ligated off and removed together with the testis. The sac, very much thickened and adherent, was removed and the neck sutured at the internal ring. The closure of the inguinal canal was then effected in the usual manner. Drainage was provided for at the lowest end of the wound.

Except for a slight discharge from the drainage tract, the wound healed by primary union. The patient made an uneventful recovery and was discharged in three weeks in good general condition and with a firm wound.

COMMENTS

Vomiting has long been regarded as an essential symptom of intestinal obstruction caused by strangulated hernia and is so taught to students. A review of the literature at my disposal produces the following opinions: Vomiting at first of stomach contents and later of fecal material is evidently considered as an essential symptom in the following systems: Keen's "Surgery," "International Text-Book," "American Text-Book," Dennis' "System of Surgery," Von Bergmann's "System"; also in the surgical works of Ashhurst, Erichsen, Jacobson, Pick, Walsham, Tillmann, Spencer and Gask, and DaCosta. Sir James Paget in his "Clinical Lectures" says, "If I were asked which of the signs of strangulation I would most rely on as commanding the operation, I should certainly say the vomiting." The only exception made is by Treves who writes in his System, "Vomiting appears early, is a marked and *almost* constant symptom. . . ."

The gangrenous condition of the testis was evidently caused by pressure of the sac and contents on the spermatic cord. This must be a very unusual occurrence, as no mention is made of it in any of the above text-books.

HUGE HYDRONEPHROSIS (TWO GALLONS CAPACITY)

H. J. WHITACRE, B.S., M.D.
CINCINNATI

Hydronephrosis is not an unusual lesion, and a distention of the pelvis of the kidney to a capacity of one or even two pints is perhaps not rare. A distention of the pelvis, however, to produce a cyst occupying the greater part of the abdominal cavity and containing more than two gallons of fluid is sufficiently unusual to justify a record of the case.

History.—Mrs. W., aged 68, gives a report of very good health previous to her present trouble, which began about twenty years ago. Her first symptom was a very peculiar sensation in the right leg, while walking, which extended from the thigh downward, and within half an hour she could not raise the foot from the floor. There was no pain elsewhere. One month later she had a second attack of sharp pain which commenced in the back on the right side and extended downward into the lower abdomen and into the thigh and leg in precisely the same manner as the first attack. There was very great nausea at this time, but no urinary symptoms. Similar attacks recurred until sixteen years ago, when she suffered from a severe attack of "gastric disturbance," which was characterized by very intense pain in the lumbar and right iliac region. Her physician diagnosticated her condition at the time as one of gas accumulation and obstruction. (It seems to me that a stone must have become lodged in the ureter at this time to cause a permanent total obstruction of the ureter.) The acute symptoms promptly subsided, but the swelling remained as a soft tumor mass in the right side of the abdomen. During the next several years the patient suffered frequently from stomach and liver attacks, as she designates them. The tumor remained about stationary in size during this period and could always be felt. Four years ago she had a very severe attack of abdominal trouble associated with gastric irritability and severe pain in the right side, particularly in the region of the liver. During the past four years the tumor has increased greatly in size and she had many attacks of pain. She has never suffered from bladder irritability, passes a normal amount of urine, and has never noticed anything abnormal in the appearance of the urine. Her main symptoms seems to be referable to the stomach. There have been no symptoms referable to the genitalia.

Physical Examination.—When seen for the first time on March 20, 1911, the patient appeared to be very well nourished and in fairly good health. The examination was negative, except for the abdomen, which showed a symmetrical enlargement equal to that of a seven or eight months' pregnancy. On palpation a distinct cystic tumor occupying the greater part of the abdominal cavity could be easily made out, but the right half of the abdomen and the right flank was distinctly more tensely filled out than the left. A fluid wave was easily determined. The middle of the abdomen—indeed the greater part of the abdomen—was flat on percussion and a tympanitic note was given on the left side and above the cyst. (No great importance was given before operation to the fact that a tympanitic note was not elicited on the right side because all other physical signs seemed to point so definitely to a large ovarian cyst.) Bimanual examination showed the uterus to be normal and the fluid wave was easily communicated from the tumor above to the examining finger below. A diagnosis of ovarian cyst was made.

Operation.—A midline incision below the umbilicus demonstrated at once that the cyst was not attached to either ovary and that it was retroperitoneal. The peritoneum was then divided over the cyst, and a large ovarian cyst trocar inserted to draw off the fluid. Two gallons of fluid were withdrawn and perhaps one pint remained in the cyst, which was not measured. The cyst was then delivered by a blunt dissection, which extended as far upward as the liver, without much hemorrhage. A large artery and a large vein were cut between clamps and later found to be the renal artery and vein. An examination now revealed no kidney on this side and a hurried examination demonstrated no special lesion in this ureter. The incision in the peritoneum was closed by continuous suture and abdomen closed without drainage. When the cyst was filled out with cotton the kidney could be easily demonstrated flattened out to a brown-paper thinness on one side of the cyst and the ureter, renal artery and vein could be seen.

This patient made a perfect recovery and is now entirely well.

108 East Auburn Avenue.

Aneurysm and Edema.—An aneurysm may compress and obstruct the flow of blood through one of the large veins and thereby produce edema.—J. B. Murfree, in *Southern Medical Journal.*

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[*For other information see second page following reading matter*]

SATURDAY, JUNE 24, 1911

SALICYLATES IN ACUTE ARTICULAR RHEUMATISM

That there is a prevailing tendency in medicine of late years to minimize the empirical use of drugs, and to rely more largely on intelligent aid to Nature by physical means, cannot be denied. But even the most ardent "therapeutic nihilist" as a rule acknowledges the value of certain drugs at times, and among these the salicylates as a remedy in acute articular rheumatism have occupied a prominent place. Recently, however, Menzer[1] has published an article, based on his experiences as a German army surgeon, which contradicts quite forcibly our prevalent conceptions on this subject. He does not dispute the fact that the judicious administration of salicylates may alleviate the symptoms to a marked degree, and so furnish relief to the sufferer and satisfaction to the physician. But in his experience, patients so treated were much more subject to recurrences, and in particular to deforming arthropathies, than were those handled without the use of salicylates. In all, he summarizes the results of his personal observation on 141 patients, of whom eighty-six were given the drug, and fifty-five treated without. Of the former group, eighteen, or 21 per cent., were incapacitated for further military service, and of the latter, four, or only 7 per cent. On the other hand, severe cardiac complications were about half again as frequent in the absence of salicylate treatment, pleuritis was almost four times as frequent, and the average length of treatment was increased from forty-six to seventy-four days. In addition to his own figures, Menzer cites those of several others, notably of Badt[2] (324 cases), which support to some extent his position.

Menzer's explanation for the greater frequency of recurrences and persisting deformities is as follows: Acute articular rheumatism, according to his conception, is the result of the localization on various serous surfaces of a generalized streptococcus infection, and the inflammatory processes giving the symptoms of the disease are curative reactions, and purely beneficial in character. The salicylates, he believes, act by producing a general vasodilatation, thereby relieving the local hyperemia and alleviating the suffering of the patient, but incidentally delaying the prompt absorption of the toxic products, and so increasing the liability of permanent damage.

The figures given by Menzer, and quoted above, would seem to indicate that such permanent damage does occur more frequently after the use of salicylates than without them. But neither the number of his cases, nor of those of Badt is sufficient to establish such a point beyond reasonable doubt; and it may be pointed out that Menzer found that cardiac and pleuritic complications were considerably more frequent when salicylates were not used, which by a style of reasoning similar to his might be interpreted as showing the beneficial action of the salicylates in preventing these complications—an action that is almost universally acknowledged not to exist. It is true that Menzer maintains that all the serous surfaces that may present inflammatory symptoms are already infected at the time of onset of the disease. But there is absolutely no way of proving or disproving such a contention.

The article serves to illustrate admirably a method of reasoning more frequently demonstrated on the converse proposition—the advocacy of new remedial agencies—than on the condemnation of old. *Post hoc, ergo propter hoc* has long been a stumbling-block to medical progress; and while it is quite possible that Menzer's assertions may be fully confirmed by farther observation, it would be as yet somewhat premature to discard agents as efficacious in affording relief as are the salicylates in rheumatism, on the strength of the evidence so far presented.

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[1] Menzer: Ztschr. f. Hyg. u. Infectionskr., 1911, lxviii, 296.

[2] Badt: Vergleichende Statistik der Salizyl- und indifferenten Behandlung beim Gelenk-Rheumatismus: Diss., Berlin, 1883.

THE PRESENT STATUS OF ANTITYPHOID VACCINATION

The last report of the Surgeon-General of the Army adds more evidence to the already overwhelming testimony in favor of the protective value of antityphoid vaccination. The figures given for the fiscal year ending June 30, 1909, showed an incidence of typhoid fever sixteen times greater among the unvaccinated than among the vaccinated troops.[1] Up to Oct. 1, 1910, only five cases had developed among the immunized, as against 418 among the non-immunized. Moreover, of these five cases four were so mild as to leave doubt as to the diagnosis, and there were no bad effects of any kind as a result of the vaccination.[2]

The practice was introduced into our army in March, 1909, and although the taking of the treatment is entirely voluntary, over 17,000 officers and enlisted men had availed themselves of the opportunity to become immunized before the present mobilization of troops on the Mexican border.[3] Since that time the evidence concerning the procedure has been increasingly favorable. With the memory of Camp Chickamauga still fresh in our minds we are the better able to appreciate the great strides which have been made in preventive medicine since the days of the Spanish war. During that campaign there were 20,738 cases of typhoid with 1,580 deaths, and all within three and a half months. One man in every six had the disease and this was increased to one in every five among those regiments which were left in the United States.[4] Now, among the 18,000 men who have been mobilized on the southwest border for over two months, living under the usual camp conditions where rain and mud prevail, the only case of typhoid fever which has developed has been that of a single teamster who was unprotected by vaccination.[4] The results of vaccination practiced in the Army (12,000 cases up to Oct. 1, 1910) have been more fully described in THE JOURNAL by various army officers.[5]

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[1] Annual Report, Surgeon-General, U. S. Army, 1910.

[2] Keefer, F. R.: Mil. Surg., March, 1911.

[3] Naval Med. Bull., April, 1911, p. 195.

Like most medical discoveries, the final perfection of the practice of antityphoid vaccination has resulted only after years of experimentation and apparent failures. To Prof. A. E. Wright of the British Army Medical School at Netley is due the honor of having first conceived and put in practice the idea of antityphoid vaccination.[6] This was before the Boer war. The results were rather unsatisfactory in South Africa during that campaign and it was only after further experimentation that the technic was finally perfected. One of the chief troubles had been in the fact that it had not yet been fully demonstrated that the best results were to be obtained only after the repetition of the process three times at intervals of ten days. The German army next took up the investigation and as a result the medical officials succeeded in cutting the typhoid fever rate in half by vaccination of a portion of the troops in Southwestern Africa in the campaign against the Hereros in 1904 and 1907. By this time the English were beginning to get better results, and in India, in 1908, among 12,000 soldiers stationed there, 6,000 were vaccinated, and 6,000 under similar conditions were left unvaccinated and maintained as controls. They found that seven times as many of the controls contracted typhoid and eleven times as many died of it.[2]

The trial has now been made long enough and with such uniformly good results that it is time the procedure should be seriously considered in civil life. A step has already been taken in this direction by the Public Health and Marine-Hospital Service. According to instructions recently issued, officers are required to practice antityphoid vaccination on all beneficiaries of the service who may desire it.[7] Speaking in general terms, these beneficiaries include all seamen or persons employed in any capacity on any licensed vessel of the United States except enlisted men in the Army and Navy. Sailors on both inland waters and the high seas are, from the roving nature of their calling, especially liable to exposure to typhoid infection. Thus they frequently become carriers of the disease and a menace to the general public. In view of these facts the recent action of the Public Health and Marine-Hospital Service should be regarded as a measure directly calculated to preserve the public health. It would seem as though the next logical move would be to place the antityphoid vaccine at the disposal of the civilian practitioner, as has been done already with the vaccine for the treatment of rabies.[8]

EXPERIMENTAL MEASLES IN THE MONKEY

No recent experimental work has been reported on measles, but the almost universal prevalence and high mortality of the disease in the first two years of life on account of complications render any new facts regarding it of interest and importance.

Up to the present time, it has been believed that only human beings are susceptible to measles, and in recent text-books, the statement is made that attempts to transmit the disease to monkeys have never been successful, although Hektoen[1] has reported the successful inoculation of human beings with measles. Grünbaum experimented with chimpanzees but got apparently negative results.[2]

Anderson and Goldberger of the Public Health and Marine-Hospital Service, working in the Hygienic Laboratory, have just reported the successful transmission of measles from human patients to rhesus monkeys, and conclude that they have demonstrated the susceptibility of the rhesus monkey to inoculation with human measles through blood drawn from the general circulation early in the eruptive stage.[3]

A rhesus monkey inoculated by them April 28, 1911, had a slight rise of temperature on the tenth day after inoculation, and a sparse papular eruption which faded four days later, being accompanied by a fine branny scaling. This experiment was successfully repeated, other monkeys being used, and experiments were also made to test the immunity of a monkey that had previously been inoculated.

Not only have these workers succeeded in transmitting the infection from human beings to monkeys, but they also report the successful transmission of the infection from monkey to monkey.[4] The blood from each human patient was tested for sterility, as was also the monkey blood used for passage, and in no instance was a growth obtained. The transfers of the infection from monkey to monkey excluded the possibility of the symptoms observed being due to a toxin, and demonstrate that the symptoms noted were caused by a living virus. This work is another evidence of the rapid advances being made in investigations of contagious and infectious diseases generally, and while the reports referred to are only of a preliminary character, it is presumed that detailed reports will appear later and include the results of further experimental studies of the disease. In connection with this work on measles it is interesting to note that recent experiments by Cantacuzène[5] and Bernhardt,[6] and possibly also those by Hektoen and Weaver,[7] indicate that scarlet fever as well is transmissible to monkeys. Landsteiner and Levaditi[8] appear to have transmitted scarlet fever to chimpanzees. It would seem then that we are on the verge of advances in our knowledge as to the etiology and nature of these two diseases that so long have refused to yield up the secret of their causation.

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[4] Address of President Taft, delivered to the Medical Club of Philadelphia. THE JOURNAL A. M. A., May 13, 1911, p. 1399; Current Comment, p. 1399.

[5] Hartsock, Frederick M.: Antityphoid Vaccination; Result of 1,100 inoculations. THE JOURNAL A. M. A., June 25, 1910, p. 2133. Gosman, George H. R.: The Present Status of Antityphoid Inoculation, ibid., Oct. 1, 1910, p. 1169. Foster, George B.: Antityphoid Vaccination; an Instance Illustrating Its Efficacy, ibid., Nov. 19, 1910, p. 1808.

[6] Smith, F.: Jour. Trop. Med., Sept. 1, 1904.

[7] Pub. Health Rep., P. H. and M.-H. S., May 19, 1911.

[8] Ann. Rep. Surgeon-General, P. H. and M.-H. S., 1910, p. 24.

[1] Hektoen, L.: Jour. Infect. Dis., 1905, ii, 236.

[2] Grünbaum: Brit. Med. Jour., April 9, 1904.

[3] Public Health Reports, June 9, 1911.

[4] Public Health Reports, June 16, 1911.

THE INDEX

The index to the first volume of THE JOURNAL for 1911 will be found in this issue. Again we wish to call attention to a few of its valuable features. The index consists of three parts—the General Index, the Index to Current Medical Literature Subjects and the Index to Authors. In the General Index will be found all the matter, original and otherwise, including the abstracts, which appear in all of the various departments of THE JOURNAL (except ephemeral news matter), indexed by subjects and analytically, with numerous cross-references. In this department, also, will be found under the head of "Deaths" a list of the physicians who have died during this period, and under the head of "Book Notices" the titles of all books, with the names of their authors, which have been reviewed during the six months.

In the Index to Current Medical Literature will be found the titles of all articles appearing in nearly four hundred of the leading medical journals of the world; in this index also appear in a separate list the names of all authors of papers appearing in these various periodicals, as well as in THE JOURNAL.

This index is also bound in separate enlarged pamphlet form, called the "Guide to Current Medical Literature." It may be had from the Association office, either in single copies or by annual subscription. In this convenient form the physician or author desiring to look up the literature that has appeared during the previous six months has an almost complete index medicus of the literature relating to medicine. We urge our readers to give more attention to this index and to accustom themselves to depend on its aid. They will be surprised to find how completely it will fulfil their needs in looking up current literature.

Current Comment

THE INDEPENDENT PRESS

We have before us a news item from which we learn that Mrs. Murray of Roxbury, Mass., is asking $2,000 damages for the loss of her hair. About a year ago, so the newspaper says, the lady had auburn hair that reached to her waist; she used Birt's Head Wash and now has to wear a wig. We have before us, also, a large advertisement of Birt's Head Wash. These two facts considered individually would hardly be worth comment; the element of interest lies in their relation. The news item and the advertisement both appeared in the same issue of the newspaper—the Boston *Herald!* In these days when it is commonly reported that news is modified, softened or repressed to meet the real or supposed wishes of the big advertisers it seems worth while to call attention to what might otherwise be but uninteresting facts. Such episodes help to restore public confidence in the press; they also make for optimism and hopefulness. Verily, "the world do move."

THE DECLINING BIRTH-RATE IN RURAL NEW YORK STATE

Some rather unwelcome facts are brought to view by recent statistics[1] from New York state. During the month of March of the present year, there were altogether 18,693 births in an estimated population of 9,273,954. During the same period there were 14,227 deaths. It should be added, however, that during the month of March of this year, New York had the highest death-rate that it has had in a long time. The number of deaths for the month has never before been approximated in any month except March, 1904 and 1910, and even then not exceeded or even equaled. Of the births, 11,643 occurred in New York City, while there were only 8,353 deaths. In second-class cities from 50,000 to 175,000 inhabitants there were 1,104 births and only 847 deaths. In third-class cities down to 10,000 inhabitants there were 1,398 births and 1,237 deaths. As population becomes scantier, births and deaths approximate in number until in third-class cities (those under 10,000) the births and deaths are exactly equal, forty-five each. In the country places away from cities, however, there were 3,745 deaths and only 3,275 births. The reason for the more favorable balance of births and deaths in the cities is doubtless that the young people are moving into the cities rapidly, leaving the sterile older population in the country. Even taking into account this factor, however, it would appear that the number of births varies directly with the proportion of the foreign population. In New York City, where the foreign-born population is most numerous, the births exceeded the deaths by 4,617. In the other cities of the state the excess of births over deaths was only 313 for an estimated population of about a million and a half. In the country, however, where the native population is the largest and where there are the greatest opportunities for healthful living, in an estimated population of nearly 2,500,000 there were actually 470 more deaths than births. Outside of New York City, in a population of about 4,500,000, there was a net loss of more than 150 in population during the month. While, of course, it would be rash to draw sweeping conclusions from the figures for a single month, these statistics certainly invite study of the problem thereby presented. The birth-rate, of course, must be studied over an extensive field and a considerable period of time, and in connection with many other factors, some of which cannot be found in statistical tables. Meanwhile, a safe deduction seems to be that we should give our attention most seriously to developing the attractions of rural life for young people. A land where the rural population cannot hold its own, and the only increase is in the cities, comes very near being one "where wealth accumulates and men decay."

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[5] Cantacuzène: Compt. rend. de la Soc. biol., 1911.

[6] Bernhardt: Deutsch. med. Wchnschr., 1911, xxxvii, 791.

[7] Hektoen, L., and Weaver, G. H.: THE JOURNAL A. M. A., June 17, 1911, p. 1795.

[8] Landsteiner and Levaditi: Presse méd., May 3, 1911, p. 357.

[1] Bull. New York State Department of Health, April, 1911, New Series, vi, No. 4.

Observations on Low Blood-Pressures.—W. Edgecombe (*Proc. Roy. Soc. Med.*, March, 1911) has seen a number of patients suffering from no particular disease, but complaining of general slackness and want of tone, in whom the blood-pressure was abnormally low, the systolic reading being frequently below 100 mm. of mercury. In the majority of such cases there was no heart lesion discoverable, but the first sound at the apex was usually lacking in vigor; in others there were definite signs of dilatation. Improvement in the subjective sensations and objective physical signs almost always followed a rise in blood-pressure, and this led Edgecombe to seek for the most certain means of procuring this result. He therefore made a long series of observations, extending over two years, on a subject aged 40, normal in other respects, but with a persistently low blood-pressure, supplemented by serial observations on another subject and by routine observations on patients. Among the types of disorder in which he found low blood-pressures were subjects with cold hands and feet, with poor circulation, neurasthenia, tobacco poisoning, dilated heart, fibrositis, phosphaturia and arthritis deformans. Edgecombe made observations to find the effect on the blood-pressure of exercise, mental work, excitement and worry, altitude, constipation and various drugs, as aperients, alcohol, tea, caffein, tobacco, calcium chlorid and lactate, strychnin, digitalis, pituitary extract, glycogen, several proprietary preparations, including one of ergot and one from opium. He found three forms of baths that produced satisfactory results in raising the blood-pressure—the Vichy douche, the aerated Nauheim bath at temperatures on or below the indifferent point (90 F.) and the needle bath graduated from warm down to cool or cold. The Vichy douche consists of a needle douche projected downward on the patient throughout the duration of the bath while massage is administered to the whole body by attendants. After about twenty minutes' rubbing a separate needle douche is given in the erect posture and the bath terminates. The immediate effect is a rise of from 10 to 15 mm. pressure, and after a series of baths the rise in pressure becomes permanent. These measures, together with diet, exercise, change of air, etc., are to be preferred to drug treatment. As to diet, an excess of meats should be prescribed, with a corresponding diminution of the starchy elements. If drugs are required pituitary extract has the most powerful and rapid effect. Edgecombe has had no experience in giving it over long periods of time and would hesitate to continue such a powerful drug. Next in potency would be caffein, given only if the patient were not an excessive tea or coffee drinker. Calcium lactate appears to be only moderately effective; strychnin is disappointing; digitalis should be reserved for cardiac cases. The other drugs experimented with are apparently of little value.

Medical News

COLORADO

New Building for Hospital.—St. Joseph's Hospital, Denver, announces that it is about to erect a new building with capacity for fifty patients.

Nurses' Association Opens Day Camp.—The Visiting Nurses' Association of Denver has opened a day camp for babies on the grounds of the Bryant school. The undertaking is financed by the *Rocky Mountain News*.

Boulder Offers Sanatorium Site.—The city of Boulder has offered a 40-acre site for the national sanatorium for consumptives contemplated by the Foresters of America. The sanatorium, as planned, will cost $250,000.

ILLINOIS

Isolation Hospital for Sheridan.—Contract has been awarded for the erection of an isolation hospital at Fort Sheridan, to cost $21,000.

Memorial to Dr. Craig.—Members of the Rock Island County Medical Society honored the memory of the late Dr. George Gorgas Craig of that city, June 13, by holding a memorial meeting at the Manufacturers' Hotel, Moline. The program of the evening was in charge of a committee consisting of Drs. E. M. Sala, Carl Bernhardi and Joseph De Silva.

Personal.—Dr. and Mrs. Merritt C. Bragden, Evanston, have started for Europe.——Dr. George Steely has been transferred to the surgical staff of St. Elizabeth's Hospital, Danville; Dr. Raymond L. Hatfield has been appointed a member of the surgical staff, and Dr. Fred A. Baumgart has been made a member of the medical staff of the hospital.——Dr. Clinton Helm, Rockford, who is more than 80 years of age, saved his granddaughter from drowning in Rock River, June 2, diving for the body and resuscitating her after he brought her to shore.——Dr. Lee Smith, Bloomington, a member of the McLean County Medical Society for fifty-six years, has been appointed a life member.

Chicago

Class Reunion.—The class of 1899 of Rush Medical College held its annual reunion and dinner at the Bismarck Garden, June 15. Dr. William D. Byrne, the president, and Dr. John D. Ellis, the secretary, announce that they will be glad to hear from out-of-town members of the class who may be visiting Chicago.

Personal.—Dr. George E. Shambaugh, secretary of the Section on Laryngology, Otology and Rhinology, who has been ill with typhoid fever for three weeks, is reported to be improving, but he will not be able to go to the Los Angeles Session.——Dr. Thomas J. O'Malley was cut by broken glass in the hands and arms, June 13, when a runaway team ran into the platform of a car on which he was riding.

Memorial to Dr. Hyde.—Memorial services in honor of the late Dr. James Nevins Hyde were held at Rush Medical College, June 12, and a tablet presented by the alumni of the institution, and commemorating the work of Dr. Hyde, was unveiled. Charles Cheney Hyde made the presentation speech on behalf of the alumni, and the gift was accepted in the name of the student body by the dean, Dr. Frank Billings. Dr. James B. Herrick delivered the memorial address.

Diarrheal Diseases.—The health department, in its *Bulletin*, requests the cooperation of the medical profession and the hospitals of Chicago in the matter of reporting statistics of diarrheal diseases which come to their notice. The application of effective measures for prevention must be guided by statistical data which can be obtained only through this cooperation. Unless specially requested, it is not the purpose of the department to visit a patient under a physician's care, but, if the physician indicates that inspection should be made of the surrounding sanitary conditions of the foodstuffs, including milk furnished the family, the department will give immediate attention to the situation. Postal cards for these reports will be furnished free to physicians and hospitals.

INDIANA

Tent Colony for Terre Haute.—The tuberculosis committee of the Terre Haute Society of Organizing Charity has opened a tuberculosis colony on the Deming Camp, southwest of the city and on the river. Several shacks are now on the site and other shacks will be erected to accommodate the patients.

Personal.—Dr. Tilman O. Armfield, Ellwood, asks for information regarding his son Jesse T. Armfield, sometimes known as "Jack" Armfield, who is reported to be in the northwestern states and is most likely located on a claim or ranch or at a mill or lumber plant. He suggests that some of his friends who go to Los Angeles might perhaps learn something of the lad while in the West.——Dr. James V. Nelson, Logansport, has been appointed coroner of Cass County.——Dr. Charles Rea, Falmouth, who was recently operated on for the removal of gall-stones at the Sexton Sanitarium, Rushville, is much improved.——Dr. Calvin W. Burket, Warsaw, sustained painful injuries in a fall down stairs, June 7.——Dr. Leida Powers Leasure, Auburn, has been appointed superintendent of schools of De Kalb County.——Dr. T. Victor Keene has qualified as a member of the Indianapolis Board of Health.——A verdict of $5,000 has been given Dr. Ernest E. Wishard, Noblesville, in his suit for damages against the Central Indiana Railroad Company.

KENTUCKY

Personal.—Dr. J. T. Wallingford, health officer of Covington, is reported to be seriously ill with rheumatism, and Dr. Cleon C. Owens is temporarily in charge of the department. ——Dr. William M. Dwyer, Louisville, was struck by a street car while driving recently, and suffered a dislocation of his right arm.

Equipment of Sanatorium.—Provided there are no legal obstacles in the way, the Louisville Hospital Commission will appropriate $25,000 for use in equipping Waverly Hill Sanatorium for the treatment of all tuberculosis patients. In order to convert the present buildings into a permanent institution, it is estimated that $27,000 will be required, and it is planned to build four additional wards, each to accommodate sixteen patients. Work will be begun in a few days on the building selected by the commission for use as a temporary city hospital.

LOUISIANA

Health Exhibit Train to Los Angeles.—The Health Exhibit Train of the Louisiana State Board of Health is to be taken to California to be exhibited at the meeting of the American Medical Association, Los Angeles. The train will go via El Paso and will return via Ogden, Omaha and Chicago.

New Parish Society.—The physicians of West Carroll met in Pioneer recently and organized a parish medical society, electing Dr. Thomas N. Pulley, Floyd, president; Dr. Charles W. Smith, Oak Grove, vice-president; Dr. I. R. Fowler, secretary and treasurer, and Dr. John J. Flake, Pioneer, delegate to the state medical society.

Seeking Leprosy Serum at Tulane.—At a recent lecture Dr. Charles W. Duval, professor of pathology at Tulane University, described the experiments that he and his assistants had been making in leprosy and spoke of the preparation of a serum, which, it was hoped, might prove beneficial in the disease as it has already proved successful in test cases.

The Picayune Cup Presented.—The *Picayune* loving cup, given to Dr. Sarah Tew Mayo because of her splendid activities in behalf of the Woman's Dispensary, New Orleans, was presented May 26, in the presence of members of the Progressive Union, the Orleans Parish Medical Society, various women's clubs, etc. The presentation was made by Mr. M. J. Saunders.

Councilors of State Society.—The Louisiana State Medical Society, at its thirty-second annual meeting, elected, in addition to the officers mentioned in THE JOURNAL of June 10, the following councilors: First district, Dr. Paul E. Archinard, New Orleans; second district, Dr. Hermann B. Gessner, New Orleans; third district, Dr. Henri L. Ducrocq, La Fayette; fourth district, Dr. Randall Hunt, Shreveport; fifth district, Dr. Isaac J. Newton, Monroe; sixth district, Dr. Louis G. Stirling, Baton Rouge, and seventh district, Dr. Ladis Lazaro, Washington. Dr. Clarence J. Edwards, Abbeville, is the new chairman of the House of Delegates, and Dr. Laurence R. DeBuys, New Orleans, was reelected secretary. The House recommended to the governor the names of Drs. Homer DuPuy or Edward L. McGehee, New Orleans, for appointment to the State Board of Medical Examiners.

MAINE

State Society Meeting.—The Maine Medical Association will hold its annual meeting in Augusta, June 28-30.

Subscription for Children's Hospital.—The Children's Hospital, Portland, has raised by popular subscription more than $25,000 for maintenance expenses.

Personal.—Dr. William L. Cousins, Portland, has sailed for Europe.——Dr. and Mrs. Gustav A. Pudor leave for Germany next month.——Dr. Alfred Mitchell has resigned from the faculty of the Medical School of Maine, after forty-two years' service, and Dr. Frederic Henry Gerrish has resigned from the chair of surgery after a service of twenty-nine years.——Major Bial B. Bradbury, M. C. N. G., Me., Norway, has been relieved from duty with the coast artillery and assigned to the second infantry.——Captain Charles L. Cragin, M. C. N. G., Me., Portland, has been promoted to major and Lieutenants Harry W. Sampson and William L. Haskell, M. R. C., Me., have been commissioned first lieutenants in the medical corps of the state ——Dr. James B. Cochrane, Dover, has been appointed a member of the local board of health.

MARYLAND

Bequests.—By the will of the late Dr. Charles M. Ellis, Elkton, $18,000 is bequeathed to the Medical and Chirurgical Faculty of Maryland and $5,000 to the Union Hospital of Cecil County.

Baltimore

Emergency Ward.—The Methodist Hospital Association, which is now in charge of the Maryland General Hospital, will establish on the first floor a ward for accidents and emergencies.

College to Move.—It is announced that the Maryland Medical College will be moved to buildings which it owns adjoining the Franklin Square Hospital, and that the old college building on Park Street will be sold.

MISSOURI

Compulsory Vaccination.—Beginning with next September, by order of the board of curators, all students in the University of Missouri, Columbia, will be required to be vaccinated.

Home for Physicians Planned.—At the recent meeting of the Missouri State Medical Association, the president, Dr. Herman E. Pearse, Kansas City, recommended that a committee be appointed to consider plans for either a home or pensions for indigent, infirm and aged physicians, and their wives or widows.

Southwest Missouri Physicians Meet.—The annual meeting of the Southwest Missouri Medical Association was held in Springfield, May 25-26, and the following officers were elected: president, Dr. Oscar N. Carter, Republic; vice-presidents, Drs. Francis S. Stevenson, Aurora, and Theodore A. Coffelt, Springfield; secretary, Dr. Herbert S. Hill, Springfield, and treasurer, Dr. Lee Cox, Springfield.

Ambulance Surgeons in Kansas City.—At a joint meeting of the police commissioners of Kansas City with the members of the hospital and health board, it was agreed that Dr. Eugene Carbaugh, Kansas City, the new police surgeon, is to have no authority whatever over the surgeons attached to the automobile ambulances. It was also agreed that these surgeons shall be called, not police surgeons, but ambulance surgeons.

NEW JERSEY

Personal.—Dr. Berthold S. Pollack, medical director of the Hudson County Tuberculosis Sanatorium, Snake Hill, has been reappointed for a term of five years.——Dr. Gordon K. Dickinson, Jersey City, visiting surgeon to the city hospital, has been given leave of absence and is going abroad. Dr. Charles H. Finke, Jersey City, has been promoted from assistant visiting physician to visiting physician.——Dr. Robert R. Armstrong, Passaic, sustained a fracture of the right arm in a collision between his automobile and a wagon, May 31.——Dr. Stewart Maul, intern in the Atlantic City Hospital, has resigned.

Society Meetings.—At the annual meeting of the Salem County Medical Society, held in Salem, Dr. Henry Jackson, Salem, was elected president; Dr. Frank B. Husted, Quinton, vice-president; Dr. Henry Chavanne, Salem, secretary and treasurer; Dr. John F. Smith, Salem, reporter, and Dr. Wm. H. James, Pennsville, censor.——Hunterdon County Medical Society has elected the following officers: president, Dr. Isadore Topkins, Califon; vice-presidents, Drs. Henry H. Miller and Samuel B. English, Glen Gardner; secretary, Dr. Obadiah H. Sproul, Flemington, and treasurer, Dr. Edw. W. Closson, Lambertville.——Camden County Medical Society at its annual meeting held in Camden, April 25, elected Dr. Aahab Haines Lippincott, Camden, president; Dr. John K. Bennett, Gloucester City, vice-president; Dr. Daniel Strock, Camden, secretary; Dr. Alexander S. Ross, Camden, assistant secretary. ——A meeting was held, May 12, in the lecture room of the Newark Free Public Library, under the auspices of the New Jersey State Pediatric Society. The evening was devoted to a symposium on the "Hygiene of Childhood" which was divided into the hygiene of development, environment and school life, and prophylactic hygiene.——At the annual meeting of Sussex County Medical Society, held in Newton, May

10. Dr. Albert N. Jacobs, Sparta, was elected president; Dr. Edward A. Ayers, New York City, vice-president; Dr. Frederick P. Wilbur, Franklin, secretary; Dr. Ephraim Morrison, Newton, treasurer, and Dr. Harvey D. Van Gassbeek, Sussex, reporter.——Bayonne Medical Society at its annual meeting elected Dr. Ernest Thum, president; Dr. J. Stucky Smith, vice-president, and Dr. Frank, secretary-treasurer.——The Society for the Relief of Widows and Orphans of Medical Men of New Jersey, at its annual meeting held in Newark, elected the following officers: president, Dr. Archibald Mercer; vice-president, Dr. Edward J. Ill; secretary, Dr. Charles D. Bennett, and treasurer, Dr. Harold A. Tarbell, all of Newark.——The Physicians' and Surgeons' Club of Jersey City held its eighth anniversary meeting in New York City June 6. Dr. Daniel B. Street was elected president; Dr. John M. B. Wainwright, vice-president, and Dr. James G. Enright, secretary and treasurer.

NEW YORK

Alumni Meeting.—The annual meeting of the Alumni Association of the medical department of the University of Buffalo was held May 30 and the following officers were elected: president, Dr. Charles L. Preisch, Lockport; vice presidents, Drs. Nellie V. Chappell, Buffalo; Eugene B. Horton, Niagara Falls; Edgar A. Forsyth, Buffalo; Jacob E. K. Morris, Olean, and Benjamin F. Rogers, Buffalo; secretary, Dr. Descum C. McKenney, Buffalo; treasurer, Dr. William F. Jacobs, Buffalo, and trustee, Dr. Marshall Clinton, Buffalo.

New York City

Cornell Commencement.—The thirteenth annual commencement of Cornell University Medical College was held at the college, June 14.

Epidemic Diseases on Steamer.—On the arrival of the steamer *Carpathia* at quarantine, June 6, fifty cases of measles were reported on board, and the passengers were detained at quarantine until those affected had been transferred to Hoffman Island.——*La Bretagne* from Havre was detained at quarantine several hours June 7 on account of a case of small-pox on board.——The Italian steamship *Europa*, which arrived from Genoa and Naples June 14, reported that a steerage passenger was suffering from cholera, and the steamer, with its passengers, was detained at quarantine.

Infants' Milk Station.—The health commission announced on June 6 the formation of an association of infants' milk stations of the borough of Manhattan, consisting of all the agencies engaged in this particular work. The objects of the association are to avoid duplication of effort and overlapping of territory, to establish an identical system of records, to provide full cooperation of existing forces, and educational publicity, and to gain the fullest efficiency in results. Dr. Sara J. Baker, director of child hygiene of the department of health, has been elected chairman of the association and the following have been selected as members of the executive committee: New York Milk Committee, Mr. Paul E. Taylor; New York Diet Kitchen Association, Miss M. L. Daniels; Nathan Strauss Laboratories, Dr. Arthur R. Green; Nurses' Settlement, Miss Lillian Wald; Babies' Dairies, Dr. Renel A. Benson, and Morningside Milk Dispensary, Mr. Allen McCurdy. At present there are sixty-five stations in the borough of Manhattan and this number will, probably, be increased during the summer. In practically all of them nurses are in attendance every day to instruct the mothers in the proper modification and care of milk, and physicians hold conferences at stated intervals during the week, at which the mothers are given general instruction as to the care of babies, and sick babies are treated.

NORTH CAROLINA

Society Meeting.—At the annual meeting of the Rockingham Medical Society, held in Wentworth, May 26, the following officers were elected: president, Dr. Thomas G. Taylor, Leaksville; vice-president, Dr. Andrew F. Tuttle, Spray; secretary and treasurer, Dr. John W. McGehee, Reidsville; delegates to the state association, Drs. Charles R. Wharton, Ruffin, and R. C. Matheson, Madison, and alternates, Drs. Samuel G. Jett, Reidsville, and Samuel Ellington, Wentworth.

New Hospitals.—Drs. James K. Hall and Paul V. Anderson, physicians on the resident staff of the State Hospital for the Insane, Morganton, N. C., with Dr. E. M. Gayle of Burna Brae Sanatorium, Philadelphia, have purchased the Westbrook Place near Richmond, Va., and will open it as a hospital for the treatment of mild cases of insanity and drug habits about September 1, 1911.——The Forsyth County Medical Society is said to contemplate erecting a hospital at Winston-Salem, to cost from $75,000 to $100,000.

NORTH DAKOTA

Personal.—In honor of Dr. Archibald L. McDonald, instructor in the College of Medicine, Grand Forks, for the last seven years, who is about to sever his connection with the institution, a banquet was given by the Gamma Phi fraternity recently.——Dr. Homer A. Smith has succeeded Dr. George A. Carpenter as health officer of Fargo.——Dr. Albert M. Fisher, Bismarck, sailed for Europe, May 19.——Dr. Fred A. Bordwell, Marmarth, sustained severe injuries to the spine in a runaway accident recently.——Dr. and Mrs. Charles L. Chambers, Bismarck, have returned from Europe.

PENNSYLVANIA

Statue to Physician Unveiled.—A bronze statue of Dr. Traill Green, Easton, first president of the American Academy of Medicine, was unveiled May 30. The statue was erected by the Eastern Cemetery Company, of which Dr. Green was first president, as a tribute to his memory, his great service to the association, to science, education, medicine and Christianity. The statue is designed by an Easton sculptor, Harry Lewis Raul.

State Milk Law.—By the terms of the Piper Pure Milk bill, approved by the governor June 8, the state is given the same standards for milk as those of the United States Government. The bill prohibits watering of milk, and provides that no substance may be added to increase its consistency, but allows the sale of skimmed milk under that name. The standard for milk is fixed at 3¼ per cent. butter fats and 12 per cent. solids, and for cream 18 per cent. butter fats, with the proviso that cream which is treated, condensed or evaporated may be sold as such if so labeled. The penalty for violation is a fine between $25 and $50, or imprisonment from 30 to 90 days, either or both. The Dairy and Food Commissioner is charged with the enforcement of the act.

Philadelphia

Free Lunches Beneficial.—The luncheon committee of the Home and School League completed on June 9 its experiment, which had been carried on for ten weeks with fifty children of the Woods School for the purpose of proving that the 3-cent lunch was beneficial as well as economical. Tests show that the children have gained in weight, that their hand grip has increased from 50 to 100 per cent. and that they have gained in lung capacity from 20 to 40 per cent.

Typhoid at State Institution.—For over two months the Health Department of this city and the state health authorities have been working to locate the source of typhoid contagion in the Pennsylvania Institute for the Deaf and Dumb, Mount Airy. Two new cases have just been reported, making a total of thirty cases and two deaths during the last two months. Tests have been made of the milk supply, butter and other foods, also a careful examination of the inmates and attendants to learn if there were typhoid carriers among them, but all without result.

Pure Food Crusade.—It has been announced by the agent of the State Dairy and Food Commission, that exposure of meat, chickens, cakes and other foodstuffs of like character to contamination from flies and dust will be followed by prosecution of the dealers under the pure food laws of Pennsylvania.——On June 6, warrants for over a dozen bakers, charged by Harry P. Cassidy, special agent of the commission, with using coal-tar dyes and bad eggs in their cakes and pies, were served by constables from Magistrate Beaton's office. A chemical analysis of the pastry sold by these bakers was made by Professor LaWall and in one pie enough yellow dye was found to stain a yard of cotton cloth.

Catholic Physicians' Guild.—The Roman Catholic Physicians of Philadelphia have organized a branch of the Guild of St. Luke, St. Cosmos and St. Damian. The first meeting was held May 26, in the hall of the American Catholic Historical Society and the following temporary officers were chosen: president, Dr. Lawrence F. Flick; vice-president, Dr. Ernest La Place; secretary, Dr. William T. Dempsey, and treasurer, Dr. Austin O'Malley. The aim of the guild is to facilitate intercourse between Catholic members of the medical profession for the discussion of medical questions relating to philosophy, morals, ethics, theology, histology and law, and the upholding of the principles of Catholic morality as against an unscientific materialism.

TENNESSEE

Medical Department Moves.—It was announced June 1, that the Vanderbilt medical and dental departments would be transferred to the old Peabody College grounds at the beginning of the next session.

Donation Toward Hospital.—It is reported that Mr. Andrew Carnegie has agreed to give $10,000 toward the completion of the new Hubbard Hospital of the Meharry Medical College, Nashville, Tenn., on condition that the college secures $10,000 additional. The work of raising this amount has already commenced.

Hospital Staff Named.—At a meeting of the Nashville City Hospital Commission, June 7, the following hospital staff was named: general surgeon, Dr. Frank P. Head; obstetrics, Dr. McPheeters Glasgow; medicine, Dr. C. Bailey Bell; genito-urinary diseases, Dr. William F. Glenn; diseases of the eye, ear, nose and throat, Dr. Marvin M. Cullom, and abdominal surgery and gynecology, Dr. Rufus E. Fort.

VIRGINIA

Epileptic Colony Opened.—The new State Epileptic Colony in Amherst County, opposite Lynchburg, has been formally opened. Ninety patients have been admitted and there is still room for ten more.

Hospital Chartered.—Grace Hospital corporation, Richmond, has been chartered with a minimum capital stock of $50,000 and ground has been broken for the building at Grace and Monroe streets. Dr. Robert C. Bryan is president of the company and Dr. H. Stuart McLean, secretary and treasurer.

Medical College Elects Officers.—At the annual meeting of the faculty of the Medical College of Virginia, Richmond, June 3, all the officers were unanimously reelected, with the exception of Dr. J. McCaw Tompkins, librarian, who was made professor of diseases of children, vice Dr. Charles A. Blanton. Among the changes in the adjunct faculty are the promotion of Dr. St. George T. Grinnan, from senior lecturer on pediatrics to chief of clinics in the practice of medicine, and the succession of Dr. Douglas Vanderhoof to Dr. Grinnan as senior lecturer on pediatrics.

Child Welfare Conference.—A child welfare conference was held at Richmond, May 22-25, under the auspices of the State Conference of Charities and Correction, and presided over by Dr. R. K. Flannagan, Charlotteville. The work of the conference was taken up under the three general heads of philanthropy, education and health and civics. The main topics of discussion were "Infant Mortality," "The Normal Child," "Education," "The Dependent and Neglected Child," "The Need of Vocational Training for Girls," "The Dependent Child in Placing-Out Work," "The Delinquent Child," "Instruction of Children in Sex Hygiene," "Cooperation and Education."

WASHINGTON

Hospital Note.—Dr. Hiram M. Johnson, mayor of Toppenish, has disposed of his interest in the Toppenish Hospital.

Personal.—Dr. Edward R. Northrup, Spokane, is convalescent after a surgical operation.——Dr. Mary A. Latham is critically ill at the home of her son in Spokane.——Dr. James H. McDonald, Puyallup, is recovering after an operation performed at the Fannie Paddock Hospital, Tacoma, recently.

WEST VIRGINIA

Antituberculosis Work.—The members of the Ohio County Antituberculosis League have received $6,000 in pledges toward the erection of a sanatorium for tuberculosis.

College of Medicine Closed.—The 1910-11 catalogue of the West Virginia University contains the statement that the college of medicine of that institution has been discontinued.

WISCONSIN

Tuberculosis Commission.—The mayor of Milwaukee has appointed a commission to decide on preventive and relief measures against tuberculosis. The commission includes H. A. Wagner, Miss Katherine R. Williams, Drs. Hoyt E. Dearholt and Alfred N. Baer, and Mrs. Thomas Spence.

State Society Meeting.—The sixty-fifth annual meeting of the Wisconsin State Medical Society was held in Waukesha June 7-9, and the following officers were elected: president, Dr. John M. Dodd, Ashland; vice-presidents, Drs. Theodore J. Redelings, Marinette; Charles A. Armstrong, Boscobel, and Hoyt E. Dearholt, Milwaukee; secretary, Dr. Charles S. Sheldon, Madison (reelected); assistant secretary, Dr. L. Rock Sleyster, Waupun (reelected), and treasurer, Dr. Sidney S. Hall, Ripon. The next meeting of the society will be held in Wausau.

GENERAL NEWS

Personal.—Jefferson Medical College conferred on Dr. Victor G. Heiser of the Philippines, the degree of doctor of science, at the recent commencement exercises.

Railroad Hospital System Planned.—The Illinois Central Railroad and its allied lines announced that the Illinois Central Hospital department will be inaugurated July 1. The proposition is to build up the hospital system, slowly, on an extensive basis until it has reached such proportions as to make it possible to establish division hospitals along the lines of the roads interested, with the entire medical staff under the control of the chief surgeon of the road.

Genito-Urinary Surgeons Hold General Meeting.—At the twenty-fifth annual meeting of the American Association of Genito-Urinary Surgeons, held in New York City, May 31-June 3, Philadelphia was selected as the next place of meeting and the following officers were elected: president, Dr. Edward Martin, Philadelphia; vice-president, Dr. Edward L. Keyes, Jr., New York City; secretary and treasurer, Dr. J. Bentley Squier, New York City, and councilors, Drs. Charles L. Gibson and Robert H. Greene, New York City.

Albany Alumni Meet.—The thirteenth annual meeting of the Albany Medical College Alumni Association of New England was held in Springfield, Mass., May 23, under the presidency of Dr. Walter G. Murphy, Hartford Conn. The following officers were elected: president, Dr. Aaron L. Newton, Northfield, Mass.; vice-president, Dr. George H. Janes, Westfield, Mass.; secretary, Dr. Edgar C. Collins, Springfield, Mass.; treasurer, Dr. Harvey W. Van Allen, Springfield, Mass.; members of the board of governors, Dr. Elmore S. Allbee, Bellows Falls, Vt.; the treasurer, Dr. Creighton W. Skelton, Providence, R. I.; Dr. Frederick T. Clark, Westfield, Mass., and Dr. C. W. Crowthers, Springfield.

Tropical Diseases.—Dr. John R. McDill, Manila, professor of surgery in the College of Medicine and Surgery, University of the Philippines, announces that the institution is contemplating the publication of a work on the most common and frequent diseases in the tropics, and asks physicians to forward any reports or statistics of institutions, reprints or publications and personal observations for use in this work. To this request is appended a numbered list of the subjects on which information is desired. An especial request is made for information concerning the relative frequency or absence of certain diseases among the native population, as compared with diseases familiar to the observer in his home land; as, for instance, hypertrophy of the prostate which is common in the United States but has not been observed in a single instance in Manila, and Hodgkin's disease, which is comparatively rare in the United States but is very common in the Philippines. Varicose conditions are relatively uncommon in the Philippine Islands. Ludwig's angina is regularly encountered there, and unless treated early and promptly is very fatal. Photographs of interesting cases, with data, are requested; the English, German, Spanish or French language may be used.

Gynecoiatry and Gynecology.—According to its derivation, gynecology signifies the science that treats of the normal *functions peculiar to women and it does not include* pathologic conditions and treatment for them. For the science of treating the affections peculiar to women, the scientific term is "gynecoiatry," constructed like the term "psychiatry." At *the recent* South American medical congress a resolution presented by *A. d'Alessandro, of Buenos Aires*, advocating the use of the term gynecoiatry as the name for the specialty, was formally adopted. The *Semana Medica* reproduces the resolution as written out, with the signatures of all the members of the congress present, including Pozzi, Dührssen and Doléris from Europe, all going on record as favoring "gynecoiatry." The resolution stated in its preamble that men of science should reject terms that are the products of empiricism and should adopt rational terms, and that the ending "iatry," meaning treatment, is more suitable for the specialty than "ology," which means merely the science or physiology of women.

Congress of Tropical Medicine.—The Far Eastern Association of Tropical Medicine announces that the Second Biennial Congress will be held at Hongkong, China, Jan. 20-27, 1912, under the presidency of Dr. J. Mitford Atkinson, Hongkong. The general classification of the work of the congress is included in the following groups of subjects:

1. Protozoology—helminthology.
2. Cholera—plague—leprosy—tuberculosis.
3. Tropical Fevers—malaria—beri-beri—dysentery.
4. Surgery—obstetrics—infantile diseases.
5. Climate—hygiene—sanitation.

It is requested by Dr. Francis Clark, secretary-treasurer general, Hongkong, that abstracts in English or papers be forwarded to him as soon as convenient. Papers may be read *in English, French or German.*

FOREIGN NEWS

Chinese Aids University Hospital.—The University of Pennsylvania Medical School and Hospital in Canton, China, has received a gift of $500 from a Chinese patient who had been treated in that institution. This is the first large gift from a native resident to the work of the university in China.

Damages for Misuse of Plaintiff's Name.—The proprietors of a German patent medicine sent a package of their product. Rad-Jo, to the physician of the Queen of Holland with a guarantee that it would facilitate her impending accouchement. The physician in question. Professor Kouwer of Amsterdam, paid no attention to the package. but when the newspapers announced the normal childbirth of the queen. the proprietors of Rad-Jo at once advertised extensively that it was responsible for the satisfactory accouchement and cited an alleged interview with Professor Kouwer to that effect. He at once sued the firm for damages for this false statement, and the last mail brings word that the German court has decided in his favor, also imposing a penalty of $375 for each of the circulars distributed in future with possibly six months' imprisonment additional.

LONDON LETTER

(From Our Regular Correspondent)

LONDON, June 10, 1911.

Onchocerciasis

Dr. A. W. J. MacFadden, inspector of the local government board, has made an important report on onchocerciasis—nodules recently found in the frozen quarters of Australian meat, due to a parasitic worm formerly called *Spiroptera reticulata*, which occurs in Australian cattle. The nodules were at first thought to be merely a surface affection and easily capable of removal, but later they were found more deeply situated, especially in the intermuscular fat. Careful examination of many quarters showed that to secure freedom from the nodules, it would be necessary either to examine in detail every forequarter or else cut off from it those parts, namely, the briskets, to which they are chiefly confined. As the first course was impracticable, the second was adopted. The meat was kept in cold storage until all the flanks and briskets had been sawn off. These alone were detained for further examination, subject to the wish of the importer to utilize them further. If he gave notice that they were required only for industrial purposes, they were allowed to be removed after being rendered unfit for food. If on the other hand, they were to be used for food, they were thawed out, cut up and examined. As hindquarters were affected only around the stifle-joint, all that was necessary was to make an incision into it while frozen to pass or reject the pieces.

A report on the structure and bionomic characters of the parasite has been made by Dr. R. T. Leiper, F.Z.S. He considers that it should be included in the genus *Onchocerca* and not in that of *Spiroptera*. He has therefore proposed the name onchocerciasis. The parasite was first observed by Morris of Sydney in 1880 and since then has been found in different parts of Australia. It has also been observed in cattle from the United States, the Malay States, Java and India. The parasites are long thread-like worms and, so far as is known, cannot develop to sexual maturity within the body of the host in which they are born, without passing outside. At present nothing is known of their extra-corporeal life or of the mode of entry or exit from the host, but analogy with other members of the Filariidæ suggest that they take up their abode in some arthropod, probably a biting insect. The worms and their young do not appear to survive the death of the cattle more than a few hours. The health authorities do not agree with the view expressed by some that the nodules are of no importance to the consumer and merely interfere with the appearance of the meat. They are the product of changes in the tissues, resulting from some active toxin excreted by the worms.

Paper-Bag Cookery

Considerable attention is being given in the press to a new method of cookery in paper bags which has been devised by a well-known chef, M. Soyer. The food, whether meat, fish, fowl, vegetables or even stews, is inserted into a specially prepared paper bag. which is generally greased and placed in the oven. It is claimed that the result is simply perfect, as the natural flavors of the food are preserved, and that a great saving of time and trouble is effected, as the cleansing of numerous pots and pans becomes unnecessary. Moreover, the objectionable smell of cooking throughout the house is avoided.

Japanese Mice for Cancer Research

Three hundred and sixty waltzing mice have just arrived for the National Cancer Research Fund. They were sent to Dr. E. F. Bashford, the director, by Professor Higuchi of Tokio, who recently completed a course of research work in the Fund's laboratories. The mice will be used to determine the effects of acclimatization and dieting in increasing or decreasing the susceptibility of mouse-tissues to mouse cancer. It has already been found in the laboratories that if living cancer tissues from English mice are implanted on recently imported foreign mice, there is a certain amount of resistance to growth. Only a small percentage of the inoculated mice develop tumors, but after a time this protection wears off and finally foreign mice become as susceptible as English mice.

The Mine Accidents Act

In a previous letter to THE JOURNAL the recent act to prevent accidents in mines has been described. The Home Secretary has now issued the following order. Rescue brigades consisting of not less than five persons employed at the mine who have been selected on account of their knowledge of underground work, coolness and powers of endurance, and who have been trained in first aid, shall be maintained at every mine. Where the number of workers is less than 250, one brigade is to be formed; when from 250 to 500, two brigades; when from 500 to 800, three brigades; and when over 800, four brigades. Where the total number of underground workers is less than 100 the manager of the mine shall have the privilege of calling for a brigade from a central rescue station. No person unless authorized by the management or by the official present at the surface, shall be allowed to enter a mine after an explosion of firedamp and coal-dust, or after the occurrence of a fire, for the purpose of engaging in any rescue work. No rescue brigade shall be deemed competent unless it undergoes a course of training approved by the secretary of state. At a mine which maintains a rescue brigade there shall be kept two or more small birds or mice for testing carbon monoxid, two electric hand lamps for each brigade, one oxygen reviving apparatus, a safety lamp for each member of the brigade for testing for firedamp, and an ambulance box. At each central rescue station not less than fifteen complete sets of breathing-apparatus shall be maintained with the necessary number of hand-lamps and oxygen reviving apparatus, and a motor car in constant readiness. Special rules for sidings and for the installation and use of electricity in mines are also proposed. The use of electricity is to be prohibited in any part of a mine where it would be dangerous on account of the risk of explosion of gas or coal-dust. Provision is also made for cutting off the supply of current to the mine at the surface, in order to prevent danger.

Disease as an Aid to Natural Selection

At the Eugenics Education Society the new president, Major Leonard Darwin, one of the three sons, all eminent in science, of the great evolutionist, said that disease produced beneficial results in preventing sickly stock from reaching maturity and reproducing. Any improvement in environment of mankind lessened disease, and every success in the efforts toward its curb would tend to prevent natural selection. The campaign against disease, of which all warmly approved, was in some ways having anti-eugenic effects, and it was necessary to see that it was accompanied by other reforms tending to counteract its evil influences. There was an inevitable temptation of social reformers to concentrate the attack on those points where the results seemed to be most obvious and immediate. The misery and disease which surrounded us seemed to demand immediate attention and it needed a distinct effort to divert our thoughts to the no less real needs of unborn generations. A less creditable loadstone, the voting power of the people, acted in the same direction. Both the philanthropist and the politician always found themselves under the temptation, if not actually to turn a deaf ear to the eugenic reformer, at all events to devote their whole energies to securing immediate results. He urged that one group of societies should be maintained which was pledged to put aside all other objects, in order to improve the racial qualities of future generations. The most obvious and crying need for reform was the segregation of the feeble-minded, with a view to diminish their now alarming rapid reproduction. A similar need existed with regard to lunatics, criminals, habitual drunkards and the unemployable, but the difficulties were greater because segregation, to be effective, involved the imprisonment of those apparently in possession of their faculties. The need for some action, however, was urgent. Another method of benefiting future generations was the introduction of further safeguards, with the object of lessening the probabilities of marriages being contracted with one party ignorant that the life-history of the other contained heritable defects capable of appearing in the next generation. Another important subject for the consideration of the eugenist was the incidence of taxation so far as it tended to force the intelligent and thrifty to support the mentally feeble and wastrel. It was probable that every increase of rates or taxes tended to diminish reproduction. The more the self-respecting and prudent sections of the community were hit by taxation, the greater the anti-eugenic effect produced. Every increase in the burden thus thrown on the nation must harm the race, unless those who were not exposed to it, because considered incapable of bearing it, were prevented from reproducing. Arrangements are being made for an International Congress on Eugenics in London next year.

PARIS LETTER

(From Our Regular Correspondent)

Paris, June 9, 1911.

First Annual French Medicolegal Congress

This congress was held in Paris, May 29 and 30. Up to the present, medical jurists have had no other organization to bring them together than the Société de médecine légale, which is attended especially by Parisians, and the international medical congresses, in which the little section of legal medicine was almost lost among the sections representing the more numerous and more prominent other branches of medicine. The annual congress of legal medicine will admit as members, in the first place, physicians of France or French-speaking countries who are interested in any way in legal medicine, also physicians of foreign non-French-speaking countries, French, the official language, being used exclusively. In exceptional instances, scientists who are not physicians, but whose researches apply to legal medicine, may be admitted as members. In the second place, the members will be jurisconsults (magistrates, lawyers, etc.) of France or French-speaking countries, or foreigners of non-French-speaking countries under the previously defined conditions. Questions of exclusively national interest may be voted on only by members of the congress who are physicians of the country in question. The congress will hold its annual session at the end of May in a city of France or some French-speaking country, to be designated at the session of the previous year. The next congress will be held at Paris under the presidency of Dr. Lacassagne, professor of legal medicine at the Faculté de médecine de Lyon. The question which will form the subject of a paper at the next congress is "Cerebral Traumatic Hemorrhages," by Dr. Etienne Martin, *agrégé* professor at the Faculté de Lyon, and Dr. Paul Ribierre, physician of the hospitals of Paris.

Vacant Chairs at the Paris Medical School

The minister of public instruction has just declared vacant the chair of history of medicine and surgery at the Faculté de médecine de Paris, which was occupied by Dr. Chauffard, recently appointed professor of clinical medicine.

This makes three chairs at the Faculté de médecine which are vacant at present, including the chair of medical physics, vacant through the retirement of Professor Gariel, and that of medical pathology through the nomination of Dr. Dejerine as clinical professor of diseases of the nervous system.

Subscription for the Beyrouth Medical School

The Syndicat de la Presse parisienne has just opened a national subscription for the French hospital and the Faculté de médecine de Beyrouth to obtain the necessary funds for the working and the development of the services of the two institutions which have become insufficient (The Journal, April 15, 1911, p. 1122). More than $20,000 (100,000 francs) have already been subscribed.

The most eminent professors of Paris, Lyons, Bordeaux, Toulouse, Montpellier, Lille and Nancy, without distinction of party or creed, have called attention to the situation of the Faculté catholique et française de Beyrouth.

Personal

On May 30, the Académie de médecine elected Dr. Lermoyez, who is a physician of the Hôpital Saint-Antoine, and especially well known as a specialist in diseases of the larynx, nose and ears, as a member in the section of therapeutics and medicine, in place of Dr. Huchard, who died last December.

M. Lapicque has been appointed professor of general physiology at the Muséum d'histoire naturelle in place of Dr. Nestor Gréhant, who died March, 1910.

Dr. Chauffard, professor of the history of medicine and surgery at the Faculté de médecine de Paris, has been appointed, at his request, professor of clinical medicine at the same institution.

Inauguration of the Institute of Infantile Hygiene

On March 8, at the Hospice des Enfants-Assistés, the new Institut de puériculture (The Journal, Jan. 28, 1911, p. 283) was inaugurated, Dr. Variot being the initiator and director.

Altitude in the Treatment of Infantile Eczema

Dr. Marfan, professor of therapeutics at the Faculté de médecine de Paris, on May 30 called attention before the Académie de médecine to the good results which he had obtained in certain serious forms of infantile eczema, which were resistant to all the usual means of treatment, by sojourn in the mountains at a height of over 3,000 or 4,500 feet (1,000 or 1,500 meters). Having observed, empirically, such results, Dr. Marfan employed altitude in the treatment of fifteen serious cases of infantile eczema, and the treatment failed completely in only one case. The course was uniformly favorable in all the others. During the first four or five days, the situation does not change. Sometimes the pruritus and insomnia even seem to increase, then in a week or less, improvement sets in, the eruption grows pale and becomes drier, the pruritus diminishes, agitation disappears and sleep returns. After a couple of weeks there remain some spots of dry and somewhat squamous eczema and the pruritus is almost gone. Then the weight increases and growth resumes its normal course. This improvement continues during the entire sojourn in the mountains. The return to the lowlands takes place usually after a month or six weeks. In three cases the improvement or cure was maintained without relapse. In seven infants there were slight relapses but the disease never attained the intensity it had before the treatment. In three cases there were, after return, rather serious attacks which did not last long and were not accompanied by serious disturbances of the general condition. Sojourn in the country or by the seaside undoubtedly may have a favorable influence on infantile eczema, but in its serious forms this influence does not seem comparable to that of altitude. The latter treatment may, however, be reserved for serious and inveterate forms of infantile eczema with loss of sleep and weight and should not be employed until after the failure of ordinary means. It should be understood that all the general rules for the treatment of eczema should be observed during the altitude treatment. The latter may be carried on in all seasons; it is, perhaps, more effective in winter than in summer.

The Determination of Sex

At one of the last sessions of the Académie des Sciences, Dr. R. Robinson made a report on observations tending to establish a relation between insufficiency of the adrenals and determination of sex. Fifteen women presenting evident signs of insufficiency of the adrenal glands gave birth to fifteen daughters. Robinson believes that this fact has a scientific bearing on the theory or law of crossed heredity, according to which sex is determined, not by the more vigorous of the parents, but oppositely. Schenk, who has published a work on the means of influencing the sex of the embryo at will, attributes the inferiority or the difference of the two parents to the incompetency of organic metabolism in one or the other of the latter. Robinson believes that, at bottom, Schenk is right, but that there remains to be shown to what the disturbances of the nutritive metabolism are due and what are the means of regulating them. Robinson thinks that the ductless glands, in general, and the adrenals, in particular, are the only causes of these functional disturbances. Since a woman who presents disturbances of nutrition, vomiting, pigmentation, etc., is rendered inferior by her adrenals, and since such women have given birth to daughters fifteen times out of fifteen, there is only one means of producing a different sex. That is opotherapy by epinephrin.

Cremation

The Société pour la propagation de l'incinération has just held its annual meeting presided over by M. Barrier, member of the Académie de médecine. The secretary-general reported that the number of cremations in 1910 was 473, an increase of 20 per cent. over the number of 1909. The total number of cremations since 1899 when the crematory furnace was opened in the cemetery of Père-Lachaise in Paris amounts to 106,096. This number includes the bodies from the hospitals.

Gift to the Academy of Medicine

Lieutenant Kelsch, son of the *médecin inspecteur* of the armies, who recently died, has donated to the Académie de médecine the medical library and scientific papers of his father.

Measures Against Opium

One hundred and fifty senators, belonging to all political groups of the senate, have just offered a bill for the regulation of the importation, the sale, the storage and the use of opium and its extracts. The bill emphasizes the extent of social danger present from the use of opium. There are, at present, in Brest, Toulon, Marseilles and Paris, opium-joints like those in China and Cochin-China, frequented every night by a constantly increasing clientele.

The Stature of French Women

Up to the present there have been no definite data furnished in regard to the average characteristics of the French woman. The women measured by anthropologists have been, according to their own statements, organically inferior; in fact, they were the subjects used for dissection at the Faculté de médecine. Certain classes of the population do not come to the dissecting tables. Therefore, Dr. A. Marie, physician of the Asile Villejuif, and Dr. Leon Mac-Auliffe have studied about 250 Frenchwomen, aged from 21 to 30, coming from various parts of France, and belonging to all social classes, as far as possible in equal proportion. Fifty were agricultural laborers, fifty Parisian working women, fifty women of the bourgeoisie without professions, and fifty belonging to the old aristocracy, some of whom were members of liberal professions; fifty were measured at the Asile de Maison-Blanche. These measurements, of which Drs. Marie and Mac-Auliffe have just communicated the results to the Académie des sciences, show that the stature of the French woman is not 1.54 meters (about 5 feet ½ inch), as has been thought hitherto, but 1.57 meters (about 5 feet 1½ inches).

The tables drawn up by Drs. Marie and Mac-Auliffe seem likely to be serviceable, not only to anthropologists, but to criminologists and medical jurists. They will make it possible, in fact, by the measurement of a segment of a member to estimate the approximate height of the body and the principal dimensions.

BERLIN LETTER

(From Our Regular Correspondent)

Berlin, June 1, 1911.

Personal

The well-known neurologist, Professor Eulenburg of Berlin, celebrated the semi-centennial of his doctorate May 31.

Professor v. Esmarch of Göttingen has resigned the direction of the hygienic institute on account of illness and has been relieved from giving lectures.

The Imperial Insurance Bill

At the final third reading of the national insurance bill the majority party at the last moment adopted two amendments which involve a deterioration of the economic status of the medical profession and consequent injury to the hygienic conditions of the country districts. The first amendment provides that the provisions of the insurance law shall extend to those whose incomes amount to $625 (2,500 marks) instead of $500 (2,000 marks), that is, $12 a week, instead of under $10. By this vote hundreds of thousands of employees will be withdrawn from private practice and transferred to contract practice, and in this way the field of the general practitioner will be still further restricted and his income reduced. It is easy to understand, therefore, that the German medical profession will raise a vigorous protest against this measure and will try so far as is possible by legal means to avert the damage that is likely to arise from it. The amendment affecting the hygienic status of the rural districts consists in a provision which permits the Krankenkassen in the country to allow assistance to a lying-in woman for only four weeks instead of eight, as is required of the Krankenkassen in the cities. The danger of illness and death for both mother and child are thus increased by the shortening of the time during which the mother can devote her time to the care of herself and the child, on account of the lack of state aid. This is the more to be regretted since the infant mortality is much higher in the country districts than it should be. The attempt to induce mothers to nurse their offspring receives little encouragement from this measure, which is also of importance since an investigation reported by me last year has shown that the peasants often sell the good milk and save milk of inferior value for their own use. It will require the aid of private charity to compensate for the damage that will result from this resolution of the Reichstag.

Vacation Open-Air Schools in Charlottenburg

The marked success which has attended open-air public schools in the lower grades has led to the establishment of a similar school for pupils able to pay, during the long vacation. The children remain during the day under the care of their teachers, but return at evening to their parents. For care which consists of lunch, dinner and milk in the afternoon, each child pays 30 cents per day.

Prize for Essay on Racial Hygiene

A popular periodical published in Frankfurt a. M. has offered a prize of $250 (1,000 marks) for the best essay on the theme, "What is the Cost of the Degenerate Elements of the Race to the State and to Society?" In the announcement the following interesting observations are made: The laboring, wealth-producing portion of the population is obliged to support not only itself, but also all those who either cannot or will not work. In this way a heavy burden is laid on their shoulders. From a part of this burden they can never be freed. Always those who are at an age in which they are able to work must expect to replace in the care of the aged and the upbringing of children the amount which their own upbringing has cost. But the laboring population could be freed from a large part of this burden. For they must devote their efforts not only to the support of the children and the aged, but also to the support and care of the sick and defectives who are temporarily or permanently unfit for work or are unwilling to work. Immense sums in money, time and labor could be saved if by improvement of the environment in the widest sense the production of sick, crippled, insane, criminals and paupers unable to work could be prevented. But all efforts at betterment of our surroundings will fail so long as there are congenital and inherited disease and defectiveness, and the workers can be freed from this avoidable burden only by preventing the production of the sick and defective as far as possible. They are not harmful merely because they produce nothing, but also from the actual damage that they do to persons and property either consciously or unwittingly. Hindrance of the production or reproduction of those below par (*Minusvarianten*) is becoming a constantly more pressing demand in our time which is devoting itself constantly more conscientiously and more successfully to preserving the life of those who have been already born.

In all publications that have to do with the improvement of the race, reference is made to the sums which the state, the community and the private citizen must expend directly and indirectly for persons who had much better never have been born. How many thousands of worthy citizens must leave useful labor in order to devote themselves to the care of these individuals as nurses, physicians and officials! Unfortunately no critically examined, numerical data have hitherto been available in this matter which have been collected by a thorough investigation of a smaller or larger territorial division, such as a country or municipal district, a governmental division or even a province. It is only by the collection of such statistics that other communities can be aroused to the importance of this matter. An estimate of the entire cost of the defectives in a large government district should first be secured. Then the part which is contributed to this sum by the care of those affected by congenital and hereditary defect can be determined so far as the available material permits.

The competition for the prize is open to every one, but the article must be written in the German language or be accompanied by a translation into German.

Flower Tag Days

The flower days of which I have spoken have been very successful in some of the cities in which they have been held. In Bremen, $21.000 (82,000 marks), in Hanover, $22,500, in Breslau, $42.500, and in Hamburg, $100,000, were received in one day. These facts substantiate the prediction which I made in a previous letter, and I believe that a similar success will be achieved in Berlin.

Tuberculosis as a Housing Disease

The investigations carried out by the tuberculosis hygiene station in our neighboring city, Schöneberg, have confirmed the fact emphasized by Robert Koch that tuberculosis is largely dependent on the housing conditions. From April to June of last year, 400 unselected dwellings in which 439 tuberculous patients lived, were systematically inspected. Fifteen of the affected families occupied merely a kitchen and in 245 cases the dwelling consisted of a kitchen and bedroom only. In 7 per cent. of all the dwellings the space of the room occupied by the patient as a bedroom was not equal to 10 cubic meters per person; 386 patients slept in the same rooms with 749 persons not recognizably tuberculous, 570 of whom were children. Only 46 persons had a bedroom separate from the healthy; in 13 of these cases the kitchen was used as the bedroom. On the ground of these results the director of the tuberculosis dispensary (*Fürsorgestelle*) comes again to the conclusion that the removal of patients with open tuberculosis to hospitals and sanatoriums is the best way to counteract the evils arising from the conveyance of infection by the dwelling. At least the severely sick should be removed. Gratutious disinfection is necessary after death and also periodically during the life of the patient—measures which are not enforced by law in Prussia.

VIENNA LETTER

(From Our Regular Correspondent)

Vienna, June 6, 1911.

Gifts for a Cancer Hospital and a Scarlet Fever Ward

The newly formed society for cancer research in Austria has just now received a substantial grant of 1,000,000 kronen ($250,000) for the purpose of pursuing its scientific research on human cancer. A lady in private life, who was during her lifetime an anonymous benefactor of numerous charitable institutions in this city—the municipality of Vienna conferred on her a special mark of distinction as "an anonymous benefactor of mankind"—devoted her large estate and residue to the benefit of the poor sick. Her trustees convoked a jury of medical men, and it was decided, after some discussion, to hand over the above-mentioned sum to the society for cancer research, while half that sum has been given to the children's hospital in the tenth district. There a large pavilion or two will be erected solely for cases of scarlet fever, and in various other children's hospitals similar wards will be established as long as the funds permit. The cancer society, of which Professor von Eiselsberg is the president, will erect a hospital for 100 beds, for neoplasmas alone. This most welcome addition to the research outfit of science will no doubt prove a most valuable and indispensable weapon in the fight against malignant disease. Like Czerny's cancer hospital, it will form a center of learning and investigation, and perhaps of renewed hope. In this country we are not used to wealthy persons giving such large gifts for charity or science; the more one must appreciate the clear insight of a woman.

A Fresh Case of Cholera

Owing to the strict measures taken against cholera in Austria-Hungary last autumn, the disease was stamped out half a year ago from our empire. But a few days ago a person in Graz, the capital of mountain-bound Styria, 100 miles from Vienna, was taken to a hospital in a most suspicious condition and died there. Asiatic cholera was diagnosed beyond doubt. The infection of the victim was traced to Venice. Strictest disinfectant and prophylactic measures were adopted at once; a quarantine was imposed on all persons known to have been in touch with the deceased man within the last week. At present there is every reason to hope that the outbreak will be suppressed very quickly. There has been no case of cholera reported on in Italy for several months, and in spite of the International Cholera Convention nothing was known of any such case being reported in Venice. It remains to be seen how it was possible for this patient to contract the disease in Venice.

Scarcity of Dwellings and Decline of Consumption of Meat in Vienna

Within the last few years the cost of living has increased in this city by more than 25 per cent. as a consequence of two facts pointed out in the report of the health bureau of Vienna. These are: the increase of the rent for lodgings and the general increase of the price of food, chiefly of meat. These two facts tend to hamper seriously the hygienic progress of the poorer classes. The report shows that the number of empty dwellings (including those in new houses, for which permission for inhabiting had not yet been given) was 5,420 in the year of 1906, while last year only 2,900 such dwellings were counted. The rent has gone up from 10 to 15 per cent. for the larger flats and tenements (four to eight rooms), from 15 to 25 per cent. in the medium-sized lodgings (two to four rooms), and to more than 30 per cent. for the smaller lodgings—the workingmen's lodgings. The price of meat has gone up from 30 to 40 per cent. during the last five years, and the consumption has promptly declined. The average consumption of this proteid food per head was 75 kilos (150 pounds) yearly some twelve years ago. It was between 75 tnd 72 kilos until 1905, and since then a constant fall was noticed until in 1910 it stood at 66 kilos (133 pounds), indicating a decrease of 9 per cent. in five years. In vain the medical circles and also the military authorities pressed for permission to import frozen meat. The influence of the agrarian landowners has kept the duty on meat so high as to make importation impossible. The effect on general health and on national physique will not be marked until some more years pass; meanwhile the deterioration will go on until public investigation compels a change of legislation.

Dentistry for Women

With the increase in the number of female medical students, the question of appropriate employment of the women physicians had to be answered. In our country people are not yet accustomed to calling on a lady in case of illness, and the majority of those women who are practicing hold appointments in a club or a "Krankenkasse." A memorandum by a private medical association requests the faculty of the Austrian universities to point out to female physicians and students that dentistry would be a good field for their abilities. The exactness and neatness of the work required from the standpoint of a dental treatment, the openings in medium-sized towns, where hitherto only dental technicians are working on and in the patients' mouths, and, perhaps, the lesser trouble make this branch of our art really advisable for the female physicians. In this country, each dentist must be a fully qualified M.D., and a law is in preparation which will do away with the dental technician of the present times who is no doctor, but still practices dental surgery. A number of ladies are now employed by some of our well-known dentists, and it must be stated that, for instance, in the dentistry schools, the female physicians are preferred by the patients of their own sex. Therefore, the recommendation of dentistry has been received with great approval by those interested in the question.

The Public Service

Medical Department, U. S. Army

Changes for the week ended June 17, 1911.

Kellam, F. C. A., M.R.C., ordered to active duty and will proceed to the Walter Reed General Hospital, Takoma Park, D. C., for duty.

McCaw, Walter D., lieut.-col., detailed as instructor in hygiene and sanitation at the school for officers of the Medical Corps, National Guard of New York, Pine Camp, N. Y., Aug. 5 to 13, 1911.

Reynolds, Charles R., major, detailed as instructor in map reading, sanitary units and allied subjects, at above camp, at Pine Camp, N. Y.

Norman, Seaton, M.R.C., relieved from duty in the Department of Texas on return of Major Robert B. Grubbs, Medical Corps, and then return to Fort Leavenworth, Kan. Lieutenant Norman will proceed to his home and on arrival will stand relieved from duty in the Medical Reserve Corps.

McMillan, C. W., lieut., left Base Hospital, Fort Sam Houston, Texas, on fifteen days' leave of absence.

The following named officers, Medical Corps, are relieved from duty in the Philippine Islands and will then proceed, November 15, to San Francisco, and on arrival report to the adjutant general of the Army for further orders: Major A. W. Morse, First Lieut. J. R. Barber, First Lieut. E. G. Huber, First Lieut. A. D. Parce and First Lieut. J. A. Wilson.

Cullen, C. W., M.R.C., returned to Fort D. A. Russell, Wyo., from temporary duty at Fort Duchesne, Utah.

The following named officers, Medical Corps, are relieved from duty in the Philippine Islands and will proceed, December 15, to San Francisco, and on arrival report to the adjutant general of the Army for further orders: Lieut.-Col. C. E. Woodruff, Major C. C. McCulloch, Major W. E. Purviance, Captain J. R. Bosley and First Lieut. J. B. H. Waring.

The following named officers, Medical Corps, are relieved from duty in the Philippine Islands and will proceed, December 15, to San Francisco, and on arrival report to the adjutant general of the Army for further orders: First Lieuts. V. E. Watkins, A. M. Gulttard and F. J. Conzelmann.

The following named officers of the Medical and Medical Reserve Corps will proceed to the Philippines Division for duty on the transport sailing from San Francisco, Nov. 5, 1911: Major R. N. Winn, M.C.; Major F. C. Baker, M.C.; Captain H. F. Pipes, M.C.; First Lieut. E. G. Worthington, M.C.; First Lieut. J. P. Fletcher, M.C.; First Lieut. E. A. Anderson, M.R.C., and First Lieut. G. Newlove, M.R.C.

The following named officers of the Medical and Medical Reserve Corps will proceed to the Philippines Division for duty on the transport sailing from San Francisco, Dec. 5, 1911: Major J. H. Ford, M.C.; Major J. W. Van Dusen, M.C.; First Lieut. L. S. Hughes, M.C.; First Lieut. A. S. Bowen, M.C.; First Lieut. J. A. Burket, M.C.; First Lieut. F. R. Hill, M.C.; First Lieut. H. Priest, M.R.C.; First Lieut. A. H. Eber, M.R.C., and First Lieut T. S. Lowe, M.R.C.

Thomason, H. D., captain, will proceed to Nashville and Memphis, Tenn., for purpose of assisting in reorganization of sanitary troops of state, and on completion of this duty return to his proper station.

Clayton, George R., M.R.C., ordered to duty with Battery F, 5th Art., camp instruction, Sparta, Wis.

Birmingham, H. P., lieut.-col., Straub, P. F., major, and Darnell, Carl R., major, appointed members of board to meet at San Antonio, Texas, to consider defects in field organization for the Hospital Corps and to make recommendation for their betterment and to prepare a provisional manual for the management of field hospitals and ambulance companies.

Hall, James F., captain, ordered to Fort D. A. Russell, Wyo., for temporary duty.

Worthington, Joseph A., lieut., ordered to the Presidio of Monterey, Cal., for temporary duty.

Snyder, Howard M., lieut., left Fort D. A. Russell, en route to Fort Leavenworth, Kan., on detached duty.

Clayton, George R., M.R.C., ordered to duty with Battery F, 5th Artillery, camp at Sparta, Wis.

Ruddy, William P. J., M.R.C., reported for temporary duty at Washington Barracks, D. C.

Purnell, Harry S., captain, left Madison Barracks, N. Y., with troops en route to Pine Camp, N. Y., for duty.

Connor, C. H., captain, left San Antonio, Texas, en route to Fort Sill, Okla., to accompany troops to San Francisco.

Skelton, Robert, M.R.C., left Fort Jay, N. Y., en route to target range, Rensselaer, N. Y., for duty.

Lynch, Charles, M.C., is ordered to proceed to Los Angeles, Cal., thence to San Francisco, thence to Chicago, on official business pertaining to the American Red Cross.

Woodbury, Frank T., major, relieved from further duty at Fort Assinniboine, Mont.

Davis, William T., captain, left Washington, D. C., on ten days' leave of absence.

Appel, D. M., colonel, relieved from duty at Atlanta, Ga., to take effect July 1, 1911, and will report for duty to commanding officer, Fort Sam Houston, Texas.

Perley, Harry O., colonel, relieved from duty at Denver, to take effect July 1, 1911, and will report to the commanding officer, Fort D. A. Russell, Wyo., for duty.

Gray, William W., colonel, relieved from temporary duty at Omaha, and further duty at St. Paul, Minn., to take effect July 1, 1911, and will proceed to San Francisco and assume charge of the medical supply depot, that city.

Davis, William B., colonel, order to report to commanding general, Department of Texas, revoked, and on expiration of leave of absence to proceed to Fort Leavenworth, Kan., and report in person to commanding officer for duty at that post.

The following named officers of the Medical Corps are relieved from further duty at the Army medical school and will comply with orders from the commanding general of troops, San Diego, Cal.: First Lieuts. William T. Cade, Jr., Herbert H. Sharpe, Francis X. Strong, Alleyne von Schrader, Robert C. McDonald, Harry G. Ford, James F. Johnston, Paul W. Gibson, Bert R. Huntington.

Medical Corps, U. S. Navy

Changes during the week ended June 17, 1911.

Harlan, T., asst.-surg., detached from the *Quiros* and ordered to duty at the naval hospital, Canacao, P. I.

Pratt, L. L., and Omelvena, F. G., asst.-surgs., ordered to duty at the naval hospital, Canacao, P. I.

O'Malley, J. J., asst.-surg., ordered to the *Quiros*.

Reed, T. W., P. A. surgeon, detached from the *Wolverine* and ordered to the *Maine*.

U. S. Public Health and Marine-Hospital Service

Changes for the seven days ended June 14, 1911.

Oakley, J. H., surgeon, granted seven days' leave of absence from June 7, 1911, under paragraph 191, Service Regulations.

Lumsden, L. L., P. A. surgeon, directed to proceed immediately to North Yakima, Wash., and investigate an outbreak of typhoid.

Wille, C. W., P. A. surgeon, granted seven days' leave of absence from June 13, 1911.

McCoy, G. W., P. A. surgeon, detailed to attend the annual meeting of the American Medical Association to be held in Los Angeles, Cal., June 27-30, 1911.

Ridlon, J. R., asst.-surg., granted thirty days' leave of absence from June 12, 1911.

Hotchkiss, S. C., asst.-surg., detailed to join "mine rescue car" for duty in Colorado in connection with Bureau of Mines.

Stiles, C. W., professor of chemistry, directed to proceed to Wilmington, N. C., on special temporary duty.

Brice, J. W., A. A. surgeon, granted thirty days' leave of absence from July 1, 1911, with pay, and two months' leave of absence from Aug. 1, 1911, without pay.

Light, S. D. W., A. A. surgeon, granted thirty days' leave of absence from June 6, 1911.

Wetmore, W. O., A. A. surgeon, granted nine days' leave of absence from May 22, 1911, on account of sickness.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

Alabama: Montgomery, July 11. Chairman, Dr. W. H. Sanders.

Arizona: Phoenix, July 5-6. Sec., Dr. Ancil Martin.

Colorado: Denver, July 5. Sec., Dr. S. D. Van Meter, 1723 Tremont Street.

Connecticut: Regular, City Hall, New Haven, July 11-12. Sec., Dr. Charles A. Tuttle, 196 York St.; Homeopathic, Grace Hospital, New Haven, July 11. Sec., Dr. Edwin C. M. Hall, 82 Grand Ave.; Eclectic, Hotel Garde, New Haven, July 11, Sec., Dr. T. S. Hodge, 19 Main St., Torrington.

Indiana: Room 120 State House, Indianapolis, July 11-13. Sec., Dr. W. T. Gott, Crawfordsville.

Maine: State House, Augusta, July 6-7. Sec., Dr. Frank W. Searle, 806 Congress St., Portland.

Massachusetts: State House, Boston, July 11-13. Sec., Dr. Edwin B. Harvey.

New Hampshire: State House, Concord, July 6-7. Regent, Mr. Henry C. Morrison.

New Mexico: The Capitol, Santa Fe, July 10-11. Sec., Dr. J. A. Massie.

New York: June 27-30. Mr. Harlan H. Horner, Chief of Examinations Division, Department of Education, Albany.

North Dakota: Grand Forks, July 5. Sec., Dr. H. M. Wheeler.

Oklahoma: Ione Hotel, Guthrie, July 11. Sec., Dr. John W. Duke.

Oregon: Portland, July 4. Sec., Dr. E. B. McDaniel, 704 Electric Building.

Pennsylvania: Regular, Homeopathic and Eclectic, Philadelphia and Pittsburg, June 27-30. Secretary of the Medical Council, Mr. Nathan C. Schaeffer, Harrisburg.

Rhode Island: State House, Providence, July 6-7. Sec., Dr. Garner T. Swarts.

South Dakota: Mitchell, July 12-13. Sec., Dr. F. W. Freyberg, Mitchell.

Texas: Austin, June 27-29. Sec., Dr. J. D. Mitchell, Fort Worth.

Utah: State House, Salt Lake City, July 5-6. Sec., Dr. G. F. Harding, 310 Templeton Building.

Vermont: Burlington, July 11-13. Sec., Dr. W. Scott May, Underhill.

Washington: Tacoma, July 4. Sec., Dr. F. P. Witter, Traders Block, Spokane.

West Virginia: Capitol Building, Charleston, July 10-12. Sec., Dr. H. A. Barbee, Point Pleasant.

Wisconsin: Madison, July 11-13. Sec., Dr. John M. Beffel, 3200 Clybourn St., Milwaukee.

Massachusetts March and May Reports

Dr. Edwin B. Harvey, secretary of the Massachusetts Board of Registration in Medicine, reports the oral, practical and written examinations held at Boston, March 14-16 and May 9-11, 1911. The number of subjects examined in was 13; total number of questions asked, 70; percentage required to pass, 75. At the examination held in March the total number of candidates examined was 64, of whom 42 passed, including 2 undergraduates and 22 failed, including 9 undergraduates. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
Georgetown University	(1907)	76.5
Howard University, Washington, D. C.	(1907)	75
Yale University (1908) 75;	(1910)	80.2
Medical School of Maine...(1886) 75; (1898) 75;	(1908)	75
Johns Hopkins University	(1903)	77.8
College of Physicians and Surgeons, Baltimore	(1909)	77.9
Harvard University Medical School (1908) 84.2; (1909) 75, 75, 84.5; (1910) 75, 78.2, 79.4; (1911) 75, 76.1.		
Tufts College Medical School (1906) 75.2; (1910) 75.2, 77, 77.5.		
College of Physicians and Surgeons, Boston (1908) 75, 75; (1909) 75; (1910) 75.8.		
Dartmouth Medical School	(1909)	83.5
New York University Medical College	(1884)	80
Albany Medical College	(1910)	76
Columbia University, College of Physicians and Surgeons (1908) 76.9; (1909) 83.2.		
Cornell University Medical College (1910) 78.3, 78.6, 82.1.		
University of North Carolina	(1910)	76
University of Vermont...(1908) 77.1; (1909) 81;	(1910)	75
McGill University, Canada	(1910)	79.3
University of London, England	(1905)	80.6
Undergraduates		75.6, 75.8

FAILED

Kentucky University	(1904)	60.6
University of Maryland (1909) 72.1;	(1910)	69
Maryland Medical College	(1906)	69.9
Baltimore University	(1906)	71.8
Tufts College Medical School (1910) 69.4, 71.3, 72.9.		
College of Phys. and Surgs., Boston....(1908) 64;	(1910)	72.2
Harvard University Medical School	(1910)	72.7
University College of Medicine, Richmond	(1907)	68.2
University of Naples, Italy	(1909)	60.7
Undergraduates, 16.7, 32.5, 42.8, 50.5, 60.4, 69.7, 71.7, 71.8, 73.6.		

At the examination held in May, the total number of candidates examined was 31, of whom 19 passed, including 5 undergraduates, and 12 failed, including 2 osteopaths and 3 undergraduates. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
University of Maryland	(1909)	75
Tufts College Medical School (1910) 75, 75, 75.8.		
Harvard University Medical School (1908) 76.2; (1909) 80.2; 1910) 75.5, 80, 81.2.		
College of Phys. and Surgs., Boston...(1909) 75.7;	(1910)	75
Dartmouth Medical School	(1910)	81.9
Columbia University, College of Phys. and Surgs.	(1905)	86.1
University of Helsingfors, Finland	(1907)	78
Undergraduates, 75, 75, 75.3, 77.1, 78.		

FAILED

College of Physicians and Surgeons, Boston (1908) 68.2, 69.5; (1909) 71.6; (1910) 70.6, 72.		
Columbia University College of Phys. and Surgs.	(1900)	70.7
University College of Medicine, Richmond	(1907)	72.2
Undergraduates, 68.5, 71.1, 72.3.		

Marriages

Francis Hamilton Redewill, M.D., Phoenix, Ariz., to Miss Helena Munn of Ann Arbor, Mich., in Paris, France, May 18.

Francis Marion Murray, M.D., Delaware, O., to Miss Jessie Gertrude Browning of Columbus, O., May 24.

Edmund E. Ryan, M.D., Ashland, Wis., to Mrs. Amy Carlin Shores of Welcome, Wis., at Ripon, June 5.

Herbert Edward Wheeler, M.D., to Miss Beulah Madailene Smith, both of Spokane, Wash., June 7.

James Allmond Day, M.D., Jacksonville, Ill., to Miss Frances E. Wilmot of Chicago, May 6.

George R. Carson, M.D., San Francisco, to Miss Grace M. Northgraves of Chico, Cal., June 17.

Alfred Roy Warner, M.D., to Miss Anna Zeh Flansburg, both of Gallupville, N. Y., June 14.

Henry Sherry, M.D., Pasadena, Cal., to Miss Gertrude Paine of Redlands, Cal., June 22.

Harry Taylor Marshall, M.D., to Miss Nancy Lee, both of Ivy, Va., June 9.

Henry B. Erdhaus, M.D., to Miss Louise Sebastian, both of St. Louis, March 15.

Eli A. Miller, M.D., to Miss Ethel Block, both of Cincinnati, June 6.

Deaths

Carl Beck, M.D., a prominent surgeon of New York City; died at his summer home, Pelham Heights, N. Y., June 8, from pneumonia, aged 55. He was born at Neckargemuend, Germany; received his academic education at the universities of Heidelberg and Berlin, and his medical degree from the University of Jena in 1879. Three years later he came to the United States and soon became prominent as a specialist in surgery. He was a member of the American Medical Association, Society of Medical Jurisprudence, New York Academy of Medicine, and had been president of the American Therapeutic Society and German Medical Society of New York. He was also an active, honorary and corresponding member of many scientific societies, both here and abroad. He was visiting surgeon and, at one time, president of St. Mark's Hospital and surgeon to the German Polyklinik, and professor of surgery at the New York Post-Graduate Medical School and Hospital. He was the author of several monographs on surgical subjects. He had been in failing health for several months and on that account had resigned the presidency of St. Mark's Hospital.

Charles Manly Ellis, M.D., of Elkton; one of the most widely known practitioners of Maryland; died in Johns Hopkins Hospital, Baltimore, June 3, several weeks after an operation for appendicitis, aged 73. He was born at Elkton; entered the University of Pennsylvania and graduated in 1861. During the Civil War Dr. Ellis served as assistant surgeon of the Sixth Pennsylvania Volunteer Cavalry (Rush's Lancers). He was taken prisoner and his devoted attention to the wounded soldiers of the Confederate Army won for him the esteem of the South. In 1863 Dr. Ellis resigned and returned to Elkton to take up practice. He was a member of the American Medical Association; a member and former president of the Medical and Chirurgical Faculty of Maryland; president of the Cecil County Medical Society; a director of the Union Hospital of Cecil County and, until his health failed, local surgeon of the Pennsylvania Railroad.

Thomas Davis Strong, M.D. University of Buffalo, N. Y., 1851; a member of the American Medical Association; in 1894 president of the New York State Medical Association, and formerly president of the Chautauqua County and Fourth District Medical Associations; a member of the American Academy of Medicine; for twenty-five years curator of the medical department of the University of Buffalo; surgeon of the Sixty-Eighth New York Volunteer Infantry throughout the Civil War; one of the commissioners who located the present state hospital, Buffalo; died at his home in Westfield, June 6, aged 88.

Charles Henry Dixon, M.D. Missouri Medical College, St. Louis, 1878; of St. Louis; a member of the American Medical Association, Association of Military Surgeons of the United States, and St. Louis Obstetrical and Gynecological Society; clinical lecturer on surgery and professor of rectal surgery of the medical department in Washington University; consulting surgeon and chief of staff to Bethesda, and surgeon to the St. Louis City and St. Louis Female hospitals; died at his home, June 5, from carcinoma of the liver, aged 55.

John Quincy Adams, M.D. New York University, New York City, 1853; of Los Angeles; surgeon of the One Hundred and Seventy-Second New York Volunteer Infantry during the Civil War; who, while a resident of Pasadena, presented his medical library of 700 volumes to the public library of that city; died at the Good Samaritan Hospital, Los Angeles, May 23, aged 84.

Michael Thomas Pendergast, M.D. University of Pennsylvania, Philadelphia, 1882; of Philadelphia; a member of the Medical Society of the State of Pennsylvania; consulting physician to St. Joseph's Hospital; a fellow of the College of Physicians of Philadelphia; died in Ocean City, N. J., June 3, from paralysis of the throat, aged 57.

Harris Howey, M.D. St. Louis Medical College, 1845; a physician of Louisa County, Ia., since 1841; one of the California Argonauts; surgeon of the Twentieth Iowa Volunteer Infantry during the Civil War; for several years a member of the local pension board; United States gauger in 1873 and 1874; died at his home in Wapello, May 13, from senile debility, aged 94.

William Edgar Lindley, M.D. Cooper Medical College, San Francisco, 1885; of Miami, Ariz.; a surgeon of Arizona Volunteers during the Spanish-American War; formerly demonstrator of anatomy in the medical college of the University of Southern California, Los Angeles; died in Globe, Ariz., Nov. 20, 1910, from rheumatism, aged 48.

Julian E. Wood, M.D. Washington University, Baltimore, Md., 1869; for many years acting assistant surgeon U. S. P. H. and M.-H. Service, and surgeon of the Norfolk & Southern Railroad; health officer of Pasquotank County, N. C.; died at his home in Elizabeth City, June 1, aged 66.

Frederick Lemuel June, M.D. University of Buffalo (N. Y.), 1876; a member of the American Medical Association; for several terms coroner of Orleans County, N. Y., and for ten years postmaster of Waterport; died at his home in that village, June 6, from heart disease, aged 56.

Edwin Ray Humiston, Jr., M.D. University of Minnesota, Minneapolis, 1903; a member of the American Medical Association; for several years a member of the Minnesota State Board of Pharmacy; died at his home in Worthington, Minn., May 10, from lobar pneumonia, aged 43.

Henry Humphries (license, Twenty-Seventh Judicial District Board, Texas, 1896); for several years a member of the Santa Fe System hospital force with headquarters in Temple; later physician of the State Convict Camp, Bonus; died at the home of his sister in Temple, June 4.

William Smeltzer Derrick, M.D. College of Physicians and Surgeons, Atlanta, Ga., 1908; a member of the Mississippi State Medical Association and president of the Holmes County Medical Society; died at his home in Goodman, May 27, from typhoid fever, aged 28.

Henry Conant Prentiss, M.D. Berkshire Medical College, Pittsfield, Mass., 1857; for forty-five years an employee of the Massachusetts State Board of Health, Lunacy and Charity; died at his home in Somerville, May 26, from heart disease, aged 79.

Joseph J. Selbach, M.D. College of Physicians and Surgeons, Chicago, 1888; of Eau Claire, Wis.; formerly secretary and treasurer of the Intercounty Medical Society; died in the Sacred Heart Hospital in Eau Claire, May 25, from heart disease, aged 46.

Paul L. Bellenger, M.D. Memphis (Tenn.) Hospital Medical College, 1896; a member of the Louisiana State Medical Society; of Lake St. John; died near that place from the effects of gun-shot wounds received in an altercation with a tenant, aged 42.

Edmund Montgomery, M.D. University of Würzburg, Germany, 185—; for six years a practitioner in Madeira, Mentone and Rome; since 1873 a resident of Hempstead, Tex.; died at his home near Hempstead, April 17, from paralysis, aged 75.

Austin B. Chamberlin, M.D. University of Nashville (Tenn.) 1869; of Galveston; secretary-general of the Supreme Council of the Southern Jurisdiction of Scottish Rite Masons; died in Washington, D. C., June 7, from cerebral hemorrhage.

William T. Rose, a practitioner of Wichita, Kan. in the early seventies; a veteran of the Mexican and Civil Wars; coroner of Sedgwick County from 1885 to 1887; died at the home of his daughter in Wichita, May 28, aged 90.

William Henry Bertram, M.D. College of Physicians and Surgeons, Boston, 1891; Tufts College Medical School, Boston, 1895; of East Boston; died in the East Boston Relief Station, June 4, from cerebral hemorrhage, aged 61.

David W. Thompson, M.D. Eclectic Medical University, Kansas City, 1902; of Kansas City, Kan.; a member of the Kansas Medical Society; died in Seattle, Wash., January 12, from endothelioma of the cerebrum, aged 53.

William Henderson Nickles, M.D. Ohio-Miami Medical College, Cincinnati, 1910; an intern in the Cincinnati City Hospital; died in that institution, May 29, six days after an operation for appendicitis, aged 23.

Alfred Thorley Hamilton, assistant surgeon of the 148th Pennsylvania Volunteer Infantry during the Civil War, and health officer of Lewistown, Pa.; died at his home, May 9, from chronic nephritis, aged 75.

George Hazard Perry, M.D. New York Medical College, New York City, 1865; a member of the Riley County (Kan.) Medical Association; died at his home in Manhattan, April 20, from senile debility, aged 81.

Bolivar Antrobus, M.D. Medical College of Cincinnati, 1876; a veteran of the Civil War; coroner of Mitchell County, Kan., from 1890 to 1892; died at his home in Beloit, June 3, from pneumonia, aged 75.

Orlando M. Edwards, M.D. Medical College of Ohio, Cincinnati, 1859; a member of the Neosho County (Kan.) Medical Society; died at his home in Chanute, April 26, from heart disease, aged 74.

Benjamin F. Stultz, M.D. College of Physicians and Surgeons, Keokuk, Ia., 1888; a member of the American Medical Association; died at his home in Moweaqua, Ill., May 24, from nephritis, aged 56.

Oliver Broadbent, M.D. Cincinnati College of Medicine and Surgery, 1868; for forty years a resident of Madison County, Ind.; died at his home near Anderson, June 3, from heart disease, aged 69.

William A. Reid, M.D. University of Louisville (Ky.), 1890; of Muskogee, Okla.; was instantly killed in a collision between his automobile and a Frisco passenger train near Muskogee, May 11, aged 41.

David Lewis Walmsley, M.D. University of the Victoria College, Coburg, Ont., 1866; of Detroit; formerly a member of the American Medical Association; died, January 22, aged 69.

Henry M. Fowler (license, Illinois); a practitioner for forty-five years; for several years postmaster of Scales Mound, Ill.; was found dead in his room in that place, June 2, aged 77.

Allen H. Galloway, M.D. Tulane University, New Orleans, 1874; a member of the State Medical Association of Texas; died at his home in Laneville, June 4, aged 61.

Alexander Bethune, M.D. Queen's University, Kingston, Ont., 1858; a member of the Ontario Medical Council from 1869 to 1880; died at Emo, Ont., April 8, aged 77.

John Thompson Biggs (license, Indiana); who retired from active practice in 1884; died at his home in Mitchell, May 16, from valvular heart disease, aged 86.

Edward Galbraith Darling, M.D. University of Maryland, Baltimore, 1882; died at his home in Lauraville, Md., June 6, from pulmonary tuberculosis, aged 52.

Julius Patterson Trotti, M.D. Atlanta (Ga.) College of Physicians and Surgeons, 1910; died at his home in Atlanta, May 9, from heart disease, aged 23.

Walter T. Sanders, M.D. Medical College of Georgia, Augusta, 1886; of Bluffton, S. C.; died in a hospital in Savannah, Ga., May 26, from paralysis.

Homer Lee Woldridge, M.D. Washington University, St. Louis, 1901; died at his home in Breckenridge, Mo., May 27, from tuberculosis, aged 33.

Richard Daniel King, M.D. University of Nashville (Tenn.) 1853; died at his home in Whiteright, Texas, April 22, from senile debility, aged 83.

Charles J. Foscue, M.D. Medical College of Alabama, Mobile, 1900; died at his home in Walnut Springs, Tex., June 5, aged 35.

William Wallace Holloway (license Tenn., 1889); died at his home in Union City, February 5, from pneumonia, aged 69.

David F. Knott, M.D. Southern Medical College, Atlanta, Ga., 1883; died at his home in Carrollton, Ga., May 12.

Stephen E. Hazen (license, Vermont, 1896); died at his home in East Wallingford, May 5, aged 68.

The Propaganda for Reform

In This Department Appear Reports of the Council on Pharmacy and Chemistry and of the Association Laboratory, Together with Other Matter Tending to Aid Intelligent Prescribing and to Oppose Medical Fraud on the Public and on the Profession

CONVICTIONS UNDER THE FOOD AND DRUGS ACT

The government officials continue to bring to task those exploiters of drugs that are guilty of adulterating or misbranding their products. We have, at different times, given brief abstracts of the Notices of Judgments which the government issues in all cases of convictions under the Food and Drugs Act. A few more of the latest violations of this law are here appended.

Some of these decisions take on an added interest in view of the fact that the Supreme Court of the United States has recently so interpreted the Food and Drugs Act as greatly to limit its scope. The court holds that the law does not apply to statements, false or otherwise, regarding the curative effects of medicinal preparations but that it governs only misstatements regarding composition or place of manufacture.

Under the new interpretation it is a question whether the government could again—on the same grounds—secure a conviction of the exploiters of Londonderry Lithia Water, for instance. This water, as the Notice of Judgment makes clear, contains such an infinitesimal quantity of lithia as to be absolutely valueless for producing any of the therapeutic effects of lithium. The officials entrusted with the enforcement of the pure food law held that a water containing an amount of lithium so small as to be therapeutically negligible was misbranded if it was called a "lithia water." Probably under the new interpretation, the exploiters of this pseudo-lithia water could operate unmolested.

In the case of the "California Waters of Life," there is no question that under the new interpretation of the law no conviction could be secured. "California Waters of Life" is simply ordinary spring water; no more, no less. Yet it has been advertised as a cure for nearly every disease in the calendar. As it is not a cure, a conviction was obtained—but this was before the Supreme Court had limited the meaning of the law. The case against "Hair's Asthma Cure" would also have fallen to the ground had the Supreme Court's decision been rendered earlier.

LONDONDERRY LITHIA WATER

This product was sent out by the Londonderry Lithia Spring Water Company, Nashua, N. H., and was recommended "for Rheumatism, Neuralgia, Dyspepsia, Eczema, Malarial Poisoning, Gout, Gravel, Bright's Disease, Diabetes, Dropsy and all diseases of the Kidneys and Bladder." While labeled a "lithia water," the government chemists found it to contain "only a faint spectroscopic trace, insufficient to give a therapeutic action of lithia when a reasonable quantity of the water was consumed." The attorneys for the government claimed that the product was misbranded in that, while it was sold as a "lithia water" it "did not contain any appreciable amount of lithium and was not a lithia water."

The government chemists found that the amount of lithium in 4 quarts of this water was so small as to be unweighable. As chemical balances will register weights as small as 1/1200 of a grain, there was evidently less than that amount of lithium in 4 quarts. The average therapeutic dose of the salt of lithium said to be in this water is 6 grains. A person who wished to get one average dose of lithium, therefore, would have to consume, at the very lowest estimate, more than 225 barrels of Londonderry lithia water.

The government analysts also found in some of the samples examined that sodium chlorid (common salt) and sodium bicarbonate had been added to the water. As the presence of neither of these added substances was mentioned on the label and as the purchaser would believe that he was getting a natural water, the addition of these two substances was deemed misbranding. The product was condemned and forfeited and the United States marshal was ordered to destroy it. The cost of the proceedings was assessed on the company. [*Notice of Judgment No. 822.*]

KICKAPOO COUGH CURE

This nostrum was shipped in interstate commerce by the Kickapoo Indian Medicine Co., Clintonville, Conn. *Samples of* the shipment were analyzed by the government chemists and *found to be a* "solution of sugar, glycerin, vegetable extractive, aromatic bodies, inorganic salts and undetermined matter" in water and alcohol. The stuff was declared misbranded, first, because although it contained a certain percentage of alcohol, the package or bottle failed to bear a statement on the label to that effect; second, in that while it was labeled a "cough cure," it was not a cough cure, and, third, in that while it was claimed to possess properties recognized by the medical profession as necessary to the proper treatment of diseases of the lungs, it did not, in fact, possess such properties. A fine of $25.00 and costs was imposed. [*Notice of Judgment No. 826.*]

CALIFORNIA WATERS OF LIFE

This impudent fake was shown up by Mr. Adams in the "Great American Fraud." After a period of retirement it is, apparently, again being brought to the attention of the gullible. Several hundred bottles of this stuff were shipped by N. C. and E. J. Foster of La Pressa, Cal., to Tennessee. The labels bore the following statements:

> "Original California Waters of Life, formerly known as Isham's Sweet Water Springs, San Miguel Mts., San Diego, Calif. The most salubrious spot on earth. Just as it flows from nature's laboratory. Famous for its miraculous power to destroy diseases and actually rejuvenates humanity by dissolving and evacuating calcareous old age matter and microbes. The worst form of kidney, stomach, blood and skin diseases *yield to its marvelous power.* Cures rheumatism, Bright's disease, diabetes, gallstones, acute dyspepsia, insomnia, and gives new life. Makes the blood pure and postpones old age. No other water performs such wonderful cures. Requires less than one-half the amount of other medicinal waters to derive the desired results. Some physicians have requested that the precipitation, if any occurs, be saved for their own use as it is pronounced by chemists to be iron and silica and in no manner is the value of the water lessened or deteriorated."

Samples of the product were analyzed by the government chemists and the "California Waters of Life" was found to contain no ingredients beyond those found in ordinary spring water. The government attorneys insisted that the stuff was misbranded under the Food and Drugs Act and the courts, of course, upheld their contention. [*Notice of Judgment No. 830.*]

"TEMPERINE," "DOCTOR FIZZ," AND "CREAM ALE"

These three products were alleged to be temperance drinks and were shipped from Paducah, Ky., to Tennessee by one H. Friedman, who does *business* as A. M. Laevison & Co. These products were labeled respectively:

> "Drink Laevison's Temperine Special Brew, The great Temperance Drink; Guaranteed under the Food and Drugs Act non-intoxicating. A. M. Laevison & Co., Paducah, Ky."
>
> "The Great Temperance Beer, Laevison's Original Doctor Fizz Special Brew; Guaranteed by A. M. Laevison & Co., Paducah, Ky., under the Food and Drugs Act, June 30, 1906."
>
> "The Great Temperance Beer, Laevison's Original Cream Ale Special Brew; Guaranteed by A. M. Laevison & Co., Paducah, Ky., under the Food and Drugs Act, June 30, 1906."

Samples were analyzed in the Bureau of Chemistry and each was found to contain approximately *4 per cent. of alcohol.* As ordinary beer contains about the same amount of alcohol, the government officials declared these "temperance" drinks misbranded. In the case of the "Cream Ale" it was declared to be not only misbranded but adulterated in that fermented beer had been substituted in part for the "cream ale." The defendant pleaded not guilty to the charges, but the jury disagreed with him and he was fined $50 and costs. [*Notice of Judgment No. 834.*]

HAIR'S ASTHMA CURE

This nostrum was shipped by Margaretta R. Cochran and Westanna McClelland—who are known to the public as Dr. B. W. Hair—and by Robert Cochran, their agent and manager from their headquarters at Hamilton, O., to the District of Columbia. It was labeled *and sold as a cure* for asthma. Analyzed by government chemists, *it was found to contain:*

Alcohol
Potassium iodid
Glycerin
Water

As such a mixture is not a cure for asthma, the product was *declared misbranded. A plea of guilty* was entered and a fine imposed. [*Notice of Judgment No. 837.*]

BRUNNER'S GREASELESS PEROXID CREAM

John Brunner and Fred T. Barrett, who do business as the *Peroxid Specialty* Co., shipped from their headquarters at Cincinnati, O., into Indiana, a drug product labeled in part as *follows:*

> "Brunner's Greaseless Peroxid Cream."
>
> "An ideal bleach for the skin."
>
> "Brunner's Peroxid Cream produces a rich white skin and a complexion admirably fair."
>
> "There is nothing more beneficial to the skin where blemishes or impurities exist than peroxid of hydrogen."
>
> "Only the purest and best of this product is used in making Brunner's Peroxid Cream."

The stuff was analyzed by the government chemists and while, borax, glycerin and spermaceti were found, no peroxid could be discovered. As the purchaser would doubtless believe that in purchasing "peroxid cream" he was getting something containing peroxid of hydrogen, the absence of this substance from Brunner's preparation was deemed misbranding. A plea of guilty was entered and a fine imposed. [*Notice of Judgment No. 840.*]

GERMAN SEIDLITZ SALTS

This stuff was made by the American Granule and Tablet Co. of Cincinnati, O., and was sold under the following claims:

> "Promotes longevity, strengthens the nerves, cures headache after over-indulgence."
>
> "Purifies and decarbonizes the blood."
>
> "Cures chronic and sick headache."
>
> "Genuine Seidlitz must not be confounded with Seidlitz powders."
>
> "*The salt is the same as the salts from* Seidlitz Springs, Germany."
>
> "Cures hemorrhoids, constipation, bad breath, weak stomach . . ."
>
> "Positively prevents appendicitis, varicocele, apoplexy, tendency to paralysis."
>
> "Old age can be attained by taking small doses daily."

When analyzed by the government chemists, the product was found to contain the following composition:

Sulphur trioxid	41.49
Magnesium oxid	21.18
Water	37.22

As the label and the statements on the label were evidently intended to give the impression that this drug was of German origin and was derived from the Seidlitz Springs in Bohemia, it was declared misbranded for, as a matter of fact, it was manufactured in Cincinnati. The falseness of the therapeutic claims also constituted misbranding. The defendant pleaded *guilty and was fined.* [*Notice of Judgment No. 843.*]

EGYPTIAN DEODORIZER AND GERM KILLER

This was *sold* by the Paul Manufacturing Co., of Boston, Mass., as a "perfect fumigator and destroyer of disease germs." When analyzed it was found to consist of wood, apparently cedar, perfumed with essential oils. Experiment showed that the burning of this "germ killer" in a small, closed room did not kill germs after four hours exposure. The stuff was *declared* misbranded and a fine imposed. [*Notice of Judgment No. 856.*]

PAINEASE

The Jordan Company, which is the style under which Louis W. Jordan does business in Boston, sold a product *called* Painease. Some of the virtues assigned to this nostrum were:

> "Stops all pain such as rheumatism, neuralgia, *periodicals,* backache, headache, etc., in fact it is for aches and pains of every description."
>
> "It is a sure and very effective remedy for excessive dissipation of any kind."
>
> "Contains no poisonous drug or opiate of any nature."

As this nostrum *would not* stop all pains and as it was *not* a sure, safe and effective remedy for excessive dissipation of any kind and as, further, it *did* contain a poisonous drug, namely, acetanilid (5 grains in each powder), Painease was declared misbranded. The defendant pleaded guilty. [*Notice of Judgment No. 860.*]

PHILLIPS' FACE LOTION

Phillips' Face Lotion was shipped by the Phillips Medical Company, Omaha, Neb., into Colorado. It was labeled in part as follows:

> "A radical cure for any or all diseases of the skin."
> "Restores it to its natural condition."
> "Imparts a feeling of freshness."
> "Cures Pimples, Blackheads, Barber's Itch, Eczema and any itching or burning of the Skin."

Analysis showed it to contain:

Methyl (wood) alcohol..	11.2	per cent.
Ethyl (grain) alcohol...	38.56	per cent.
Ash	0.03	per cent.
Resins, etc.	1.17	per cent.
Water	49.04	per cent.

The claims for curative effects made for this preparation being falsehoods and the fact that the amount of alcohol it contained was not correctly given on the label, caused the government officials to declare it misbranded. Under the Food and Drugs Act as it now stands, unfortunately, no cognizance can be taken of the fact that this preparation contained so dangerous a product as wood alcohol. A plea of guilty was entered and a fine imposed. [*Notice of Judgment No. 862.*]

H. H. H. MEDICINE

"D. Dodge Tomlinson's Celebrated H. H. H. Medicine" was the name of a nostrum shipped from Philadelphia into the District of Columbia. The number of diseases that this "celebrated" medicine was said to cure was remarkable. Not only would sprains, bruises, headache, toothache, rheumatism, neuralgia, sore throat, cholera morbus and cramps yield to its power, but spavins, windgalls, sweeny, contracted hoof, ringbone and poll-evil would disappear like magic. Analyzed by the government chemists, the product was found to be "a dark-colored liquid containing 52.30 per cent. of alcohol by volume, free ammonia, ammonium salts, camphor, salicylic acid, iodin in combination, soap and alkaloid-bearing drug extractives resembling cinchona, volatile oils and water." The labels on the bottles of this stuff stated that it contained 68 per cent. of alcohol; in the circulars that accompanied it, it was said to contain 57 per cent. of alcohol; as a matter of fact it contained only 52.30 per cent. of alcohol. According to the label, also, "it is entirely vegetable;" according to the government analysis, it is not. As the claims for therapeutic effects were false and the claims for the composition also were false, "D. Dodge Tomlinson's Celebrated H. H. H. Medicine" was declared misbranded. A plea of guilty was entered and a fine imposed. [*Notice of Judgment No. 863.*]

Morbidness and Its Relation to Disease.—Morbidness is primarily an overflow of energy; senility a loss of vital power. The one leads to disease, the other to decay. They are both found in abnormal persons, because an overflow of energy in one direction leads to its diminution in others. The marks of the two, however, are so distinct that they can be readily separated and studied. Of the two, morbidness is more closely allied to defective heredity, and hence the stigmata of the two are practically the same. Defective heredity is the more deep-seated; the morbidness of overnutrition shows itself in a stunted development of the higher faculties. Its cause is an arresting of the normal diversion of surplus energy from the lower to the higher organs. Morbidness ends in disease when the local surplus becomes unmanageable; it creates mental abnormalities through indirect effects on the higher powers. Disease, hysteria and insanity are its most pronounced manifestations; but it has so many minor symptoms that its abnormal effects cannot be related to their cause without the most careful study. (From Patten's "The Social Basis of Religion," New York, 1911.)

Correspondence

Sanitary Features of the Maneuver Camp at San Antonio

To the Editor:—Since President Taft has given prominence to the excellent health report of the maneuver camp (here at San Antonio, Texas, where I am at present), the reasons for it have been sought. The antityphoid inoculation undoubtedly stands preeminent. This is given in three inoculations, ten days apart: 0.5 c.c. the first time and 1 c.c. at each succeeding dose.

The results have been marvelous. Never in the history of the world has a military camp been so free from typhoid fever—only a civilian teamster and a mild case in a recruit, both incurred before reaching here. The reaction from the inoculation is nominal; merely a sore arm as though one had been vaccinated and it was taking.

The other contributory causes for the excellent health have been the pure water, the intense sunshine and the elimination of flies. The latter was the hardest problem of all, but was solved by Colonel Birmingham, the chief surgeon, by destroying the larvæ of the flies, burning off the picket lines with hay and oil once per week, the daily burning out of the latrines with crude oil and hay, the use of fly-proof box-seats to the latrines and the discontinuance of the old garbage-cans. Immediately in the rear of each kitchen an open incinerator was built, according to plans furnished by the medical department, by sinking a shallow trench which was filled up with small boulders and rock; this was banked on three sides by rock and the outside plastered with mud. Here a continuous fire from 6 a. m. to 7:30 p. m. consumes 23 cubic feet of solid garbage, and 100 gallons of liquid slops dripped along the sides for each one-sixteenth of a cord of wood consumed. Garbage is not allowed to stand, but is consumed at once as soon as produced. At some of the incinerators, as at Field Hospital No. 3, Major H. L. Gilchrist commanding, the heat of the burning garbage is utilized for boiling all the water used by the hospital, as well as for sterilizing the bedding and clothing of the patients. At the same hospital the kitchen is double-screened, a vestibule being screened at both ends so that if a fly enters it can be killed in transit without getting into the kitchen proper.

Though an average of over 12,000 troops have been encamped on the same ground for over three months, yet the sick report is about one-half what it was at their home stations. Of the eight deaths here but two have been from diseases developed here, both appendicitis of the fulminating type with general peritonitis. The remaining deaths were: two from drowning, one from pneumonia following measles, the patient dying before being brought into camp; one from cerebral hemorrhage following traumatism incurred before arriving; one from empyema, the patient being already sick on arrival here, and one case of chronic Bright's disease.

In an experience with military camps extending back to 1894 through the Spanish-American War, the Philippine insurrection and the Boxer rebellion in China, this is the first large maneuver camp that I have seen that can be called sanitary in the fullest sense of the word.

FRANK W. FOXWORTHY, Indianapolis.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

TREATMENT OF HIP-JOINT DISEASE

To the Editor:—It is strange how two persons reasoning from the same facts can reach conclusions diametrically opposite. This apropos of Dr. Nutt's very interesting description of a case of adult hip-joint disease (THE JOURNAL, June 10, p. 1718). To one who studies his joints in the laboratory this case teaches, not the advisability of prolonging conservative treatment through many long, tedious years, but the absolute futility of conservative treatment of joint tuberculosis in the adult. Three "different surgeons, all excellent men of high standing," had attempted the impossible task for perhaps ten years, the fourth tires of it, the fifth now tries it again, and expects "that frequent examinations will determine a disappearance of the signs." I venture the prediction that No. 5 will have as good success as the other four.

Leonard W. Ely, Denver.

POSTGRADUATE STUDY ABROAD

To the Editor:—Can you give me any information in regard to visiting hospital clinics in Ireland, England, Germany, Italy and France? Where can I spend time with the most profit? If you can direct me to any sources of information it would greatly accommodate me. E. H. Ross, St. Johnsbury, Vt.

Answer.—This subject was taken up at some length and detailed information was given for various countries in The Journal, April 8, 1911, p. 1056.

MOTHERSILL'S SEASICK REMEDY IN THE INDEX

To the Editor:—Will you kindly inform me if any report has been made by the Chemical Laboratory of the American Medical Association concerning "Mothersill's Seasick Remedy," which I have frequently had brought to my notice by patients returning from abroad. W. O. J., Indiana.

Answer.—Mothersill's Seasick Remedy was the subject of a contribution from the chemical laboratory that appeared in The Journal, July 2, 1910. This article is indexed both under the word "Mothersill" and under the word "Seasick," not only in the General Index but also in the Index to Current Medical Literature. We do not wish, in calling attention to this matter, to discourage our readers from writing to us for information. This we are always glad to supply. We receive so many inquiries of the character of the one just answered, however, that we feel it incumbent on us to remind our readers that they may often find a desired item of information more expeditiously by consulting the index of The Journal than by writing to us.

ABDOMINAL MASSAGE IN CONSTIPATION

To the Editor:—Please refer me to literature on abdominal massage for the cure of constipation. L. J., Arizona.

Answer.—We find the following references in which the title indicates that massage is one of the remedies discussed. There is a considerable number of other articles on the treatment of constipation, many of which undoubtedly consider the subject of massage, although it is not indicated by the title.

Teachnor, W.: The Mechanical Treatment of Habitual Constipation, *Ohio Med. Jour.*, 1908, vi, 268.

Juettner, O.: Physical Treatment of Constipation, *St. Louis Med. Rev.*, 1908, lvii, 187-190.

Gant, S. G.: Treatment of Mechanical Constipation and Obstipation, *New York Med. Jour.*, September, 1909.

Hazzard, T. L.: Abdominal Massage as a Means of Relief in Chronic Constipation, *Proctologist*, St. Louis, September, 1909.

Von Akerhielm: Local Massage of Rectum in Treatment of Habitual Constipation, *Therap. d. Gegenw.*, November, 1909.

Barnes, G. E.: Treatment for Chronic Constipation, The Journal, Dec. 25, 1909, p. 2161.

Dowse, T. S.: Mechano-Therapeutics for Constipation, *Practitioner*, May, 1910.

BACTERICIDAL EFFECTS OF ALCOHOL

To the Editor:—I note that in The Journal, June 10, page 1740, in reply to a query concerning the bactericidal effects of alcohol, you say that it would require several hours for 94 per cent. alcohol to kill pus-producing organisms, and that the stronger the alcohol the more efficient it is. May I call your attention in this connection to the experiments of Harrington and Walker (*Boston Med. and Surg. Jour.*, May 21, 1903), who found that 95 per cent. alcohol was no more bactericidal than 70 per cent., and in the absence of moisture was distinctly less efficacious. This conclusion is in accord with that of numerous other authors, for instance: Rideal ("Disinfection and Preservation of Food," third edition, page 322) quotes the experiments of Minervini, in which it was shown that with 70 per cent. alcohol the *Staphylococcus pyogenes aureus* was killed in ten minutes, but survived three days' exposure to 99 per cent. alcohol. Similar figures were obtained with other organisms. Horatio C. Wood, Jr., Philadelphia.

To the Editor:—On page 1740 of The Journal, June 10, 1911, are statements indicating that the strongest solutions of alcohol have greater bactericidal effects than solutions of moderate strength, e. g., 60 per cent., and that the strong solutions are the most efficient bactericides both on the skin and in glass containers. This opinion differs from statements in our recent text-books and certainly is at variance with the following quotations from Harrington and Walker (*Boston Med. and Surg. Jour.*, cxlviii, 548-552, May 21, 1903):

"Against dry bacteria, absolute alcohol and ordinary commercial alcohol are wholly devoid of bactericidal power, even with twenty-four hours' direct contact, and other preparations of alcohol containing more than 70 per cent. by volume are weak in this regard, according to their content of alcohol—the stronger in alcohol, the weaker in action."

"The most effective dilutions of alcohol against the strongly resistant (non-sporing) bacteria, such as the pus organisms, in the dry state, are those containing from 60 to 70 per cent. by volume, which strengths are equally efficient against the same organisms in a moist condition."

"The stronger preparations of alcohol possess no advantage over 60 to 70 per cent. preparations, even when the bacteria are moist; therefore, and since they are inert against dry bacteria, they should not be employed at all as a means of securing an aseptic condition of the skin." W. A. Sawyer, Berkeley, Cal.

TREATMENT OF BROMIDROSIS

To the Editor:—Please give me some treatment for bromidrosis. Some time ago I saw an article in reference to the treatment of this condition and was under the impression it was in The Journal, but cannot find it. D. E. Little, Eufaula, Okla.

Answer.—We find no references to this subject in recent current literature. The treatment should be the same as for hyperidrosis to check the sweating. Appropriate regulation of diet and treatment for general conditions should be instituted. Salicylic acid in 5-grain doses has been used internally with success. Locally the following may be used: Chromii trioxidum (40 parts in 500) or liquor formaldehydi (10 parts in 500) or potassium permanganate (1 to 3 parts in 500) or equal parts of salicylic acid and starch as a dusting powder. (See "Physicians' Manual of the Pharmacopeia and National Formulary," p. 180). Applications should be made twice daily, and should be followed by thorough dusting of the parts with boric acid, which also should be dredged on the stockings and into the shoes if the feet are the parts subject to the perspiration. Stockings may be soaked in a saturated solution of boric acid and dried. Radiotherapy is reported efficient.

LITERATURE ON FLIES

To the Editor:—Please inform me of any literature respecting the house-fly. V. F. Marshall, Appleton, Wis.

Answer.—Pamphlets for the instruction of the public regarding flies have been published and distributed by the state boards of health of California, District of Columbia, Idaho, Illinois, Indiana, Iowa, Kansas, Louisiana, Maryland, Michigan, Mississippi, Montana, New York, North Carolina, North Dakota, Oklahoma, Oregon, Pennsylvania, South Carolina, Tennessee, Utah, Virginia, Washington and Wisconsin. Copies can be secured by writing the secretary of the State Board of Health of any of these states, addressing him at the capital city. Pamphlets and leaflets have also been issued by the Merchants' Association's Committee on Pollution of the Waters of New York, of which Edward Hatch, Jr., is chairman, and by the Anti-Fly Crusade of Detroit. Dr. S. J. Crumbine, secretary of the Kansas State Board of Health has been especially active in promoting this campaign. The Chicago Department of Health has also taken the subject up in its bulletin.

One of the most comprehensive surveys of the subject yet published is contained in "The House-Fly—Disease Carrier," by L. O. Howard, chief of the Bureau of Entomology, U. S. Department of Agriculture. The book is published by Frederick A. Stokes Company, New York; price, $1.60.

The following references to original articles appearing in The Journal and elsewhere will be found of special interest on various phases of the subject. The subjects of the articles given include flies of a few other species than *Musca domestica.*

Orton, S. T., and Dodd, W. L.: Transmission of Bacteria by Flies with Special Relation to an Epidemic of Bacillary Dysentery, *Boston Med. and Surg. Jour.*, Dec. 8, 1910; abstracted in The Journal, Dec. 24, 1910, p. 2267.

Ficklen, E. P. A.: Bacteria Carried on the Appendages of the Domestic Fly, *New Orleans Med. and Surg. Jour.*, November, 1907; abstr. in The Journal, Jan. 4, 1908, p. 74.

Newstead, R.: The Habits, Life-Cycle and Breeding-Places of the Common House-Fly, *Ann. Trop. Med. and Parasitol.*, February, 1908; abstr. in The Journal, May 16, 1908, p. 1656.

Flexner, S., and Clark, P. F.: Contamination of the Fly with Poliomyelitis Virus, The Journal, June 10, 1911, p. 1717.

Gilbert, N. C., Chicago: Infection of Man by Dipterous Larvæ, *Arch. Int. Med.*, October, 1908, p. 226. (This article contains an especially full bibliography on myiasis.)

McCampbell, E. F., and Corper, H. J.: Myiasis Intestinalis Due to Infection with Three Species of Dipterous Larvæ, The Journal, Oct. 9, 1909, p. 1160.

The following articles may also be consulted:

The Contaminated Fly, Correspondence, The Journal, May 27, 1911, p. 1593.

Miller, R. T., Pittsburg, Pa.: Myiasis Dermatosa Due to the Ox-Warble Flies, The Journal, Dec. 3, 1910, p. 1978.

Pease, H. D.: Relation of Flies to the Transmission of Infectious Diseases, *Long Island Med. Jour.*, December, 1910.

Overton, F.: Eradication of the House-Fly, *Long Island Med. Jour.*, December, 1910.

Flies and Typhoid Fever, Editorial, The Journal, Nov. 19, 1910, p. 1812.

Gudger, E. W.: Yaws Transmitted by a Fly, *Science*, Nov. 4, 1910; abstr. in The Journal, Dec. 3, 1910, p. 1951.

Flies as Carriers of Disease, London Letter, The Journal, Oct. 15, 1910, p. 1390.

Abating the Fly Nuisance, Current Comment, The Journal, Aug. 20, 1910, p. 700.

Nicholson, J. L.: Myiasis, The Journal, May 21, 1910, p. 1686.

Earlier References to the Relation of Flies to Disease, The Journal, March 10, 1910, p. 982.

Palmer, J. W.: Relation the House-Fly Bears to Typhoid and Other Infectious Diseases, *Atlanta Jour. Rec. Med.*, August, 1910.

Felt, E. P.: Methods of Controlling the House-Fly and Thus Preventing the Dissemination of Disease, New York *Med. Jour.*, April 2, 1910; abstr. in THE JOURNAL, April 16, 1910, p. 1335.

Nash, J. T. C.: Bacterial Contamination of Milk: the Connection Between Flies and Epidemic Diarrhea, *Lancet*, London, Dec. 5, 1909.

Dutton, W. F., Pittsburg, Pa.: Blue-Bottle Flies as Carriers of Infections, THE JOURNAL, Nov. 6, 1909, p. 1561.

Cleland, J. B.: Flies in Dissemination of Disease, *Australasian Med. Gaz.*, September, 1909.

Lincecum, A. L.: The Musca Domestica as a Carrier of Disease: The Improvement of Sanitary Conditions in Country Homes and Villages, *Texas State Jour. Med.*, September, 1909.

Coward, F. A., Columbia, S. C.: Musca Domestica: The Common House-Fly, *Jour. South Carolina Med. Assn.*, August, 1909.

The Fly and Typhoid Fever, Editorial, THE JOURNAL, Aug. 28, 1909, p. 720.

Hop Vines to Exclude Flies, Query and Minor Note, THE JOURNAL, July 10, 1909, p. 132.

Osmond, A. E.: The Fly—An Etiologic Factor in Intestinal Disease, *Lancet-Clinic*, April 10, 1909.

Klein, E.: Flies as Carriers of the Bacillus Typhosus, *British Med. Jour.*, Oct. 17, 1908.

Smith, T.: The House-Fly as an Agent in the Dissemination of Infectious Diseases, *Am. Jour. Pub. Hyg.*, August, 1908; abstr. in THE JOURNAL, Sept. 26, 1908, p. 1108.

Robertson, A.: Flies as Carriers of Contagion in Yaws, *Jour Trop. Med. and Hyg.*, July 15, 1908; abstr. in THE JOURNAL, Aug. 22, 1908, p. 712.

Efficient Means to Exterminate Flies (Queries and Minor Notes), THE JOURNAL, April 18, 1908, p. 1288.

Flies and Intestinal Disease, Editorial, THE JOURNAL, Jan. 18, 1908, p. 210.

Yount, C. E., and Sudler, M. T.: Human Myiasis from the Screw-Worm Fly, THE JOURNAL, Dec. 7, 1907, p. 1912.

Spoon, A. A.: Infection with Fly Larvæ, THE JOURNAL, Nov. 23, 1907, p. 1775.

Buchanan, R. M.: Carriage of Infection by Flies, *Lancet*, London, July 27, 1907; abstr. in THE JOURNAL, Aug. 24, 1907, p. 721.

LEGAL DEFINITION OF THE PRACTICE OF MEDICINE

To the Editor:—Please inform me if there has been given an authoritative judicial opinion as to the definition of the "practice of medicine." There has been much discussion on this subject in our county society A. I. LAWBAUGH, Calumet, Mich.

ANSWER.—There are a great many supreme court decisions on this point, but they are mainly decisions interpreting the definition found in the medical practice act in force in the state at the time the decision was rendered. This question is one of the most important questions to be considered in framing a medical practice act.

There are two alternatives. One is to include no definition whatever in the law and to leave the courts to determine what is the practice of medicine in accordance with common usage, standard dictionaries, etc. The other is to include a definition of the practice of medicine in the law and thus make the definition a part of the statute. This, of course, has the advantage of being explicit; but, on the other hand, if the definition is a part of the statute, then the courts will refuse to recognize anything as being the practice of medicine that is not included in the definition found in the law.

The laws in the different states vary greatly. There are also a great many supreme court decisions involving the definition of the practice of medicine, probably forty or fifty in all. These decisions, however, bear principally on the question whether a certain specific act on the part of a person accused of violating the medical practice act is or is not included in the definition. For instance, the law in Michigan makes the use of the letters "M.B." or "M.D." or of the title "Doctor" or "Dr.," or any other sign or appellation, prima facie evidence of practicing medicine and surgery within the meaning of the law. In Illinois the practice of medicine is defined as "treating or professing to treat, operating on or prescribing for, any physical ailment or any physical injury to or deformity of another person." Here the courts have held (People *v.* Lehr, 196 Ill. 361; 63 N. E. 725) that the sale of a device or mechanical appliance is not the practice of medicine. The supreme court has also held (People *v.* Smith, 208 Ill. 31; 69 N. E. 810) that the sale of spectacles for a visual defect is not the practice of medicine; that nursing an invalid is not the practice of medicine. (Oswald *v.* Nehls, 233 Ill. 438; 84 N. E. 619). On the other hand, the supreme court has held (People *v.* Gordon, 194 Ill. 560; 62 N. E. 858) that manipulation and rubbing is the practice of medicine. These examples might be multiplied indefinitely. Unfortunately, there is no uniformity on this point. For instance, in fifteen states the courts have held that osteopathy is the practice of medicine, while in twenty they have held that it is not.

These illustrations show that it is impossible for the courts to render an "authoritative" decision on this question, since the courts exist to interpret the laws which are enacted by the legislatures but cannot go beyond them. If the state legislature passes a medical practice act without a definition of the practice of medicine in it, then the courts can use their own discretion in deciding what is or what is not the practice of medicine; but if the legislature includes a definition in the law, then the courts must confine their decisions to an interpretation of such a definition; and naturally their decisions vary in accordance with the terms of the definition as it is found in the law. As we have something like forty-eight different state laws and as each one has a different definition of the practice of medicine, it will readily be seen that the decisions on this question are somewhat varied.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF POSTGRADUATE WORK, CONTRACT PRACTICE, LEGISLATION, MEDICAL DEFENSE, AND OTHER MEDICOLEGAL AND ECONOMIC QUESTIONS OF INTEREST TO PHYSICIANS

OPTOMETRY BILL DEFEATED IN PENNSYLVANIA

The optometry bill introduced into the legislature in Pennsylvania has been indefinitely postponed by unanimous vote of the committee to which it was referred. In a letter to the Westmoreland County Medical Society, published in the bulletin of the society for June, Dr. James Thorington, chairman of the state committee on optometry, calls the attention of the physicians of Pennsylvania to the necessity of having more physicians to do refraction work. He says, "If physicians in certain counties do not prescribe glasses for their patients then the patients will naturally drift into the hands of the jeweler or optician. If one physician in each one thousand population in any community would take a postgraduate course in ophthalmology and have the assurance of other physicians in his town or city that they would refer their patients for refraction, then the . . . so-called optometry question would be solved and the eyesight of the citizens would be correctly cared for."

LEGISLATION IN ILLINOIS

Since the last notice regarding Illinois legislation appeared in this department, Governor Deneen has signed the bill appropriating $60,000 a year for the medical department of the University of Illinois. By this act the College of Physicians and Surgeons of Chicago becomes the medical department of the state university. The law also provides a fixed rate of taxation for university purposes, thus making the University of Illinois, with its various departments, to a certain extent independent of the legislature, as the amount of the income for educational purposes is now definitely fixed by law.

Governor Deneen has vetoed House Bill 608, which provided for the appointment by local boards of education or school directors of one or more school nurses to have general oversight and supervision of the health of the pupils in public schools. This bill was introduced by Representative Carter of Champaign. In vetoing the bill, Governor Deneen says, "Under this measure the superintendency of the general health of pupils of public schools and the fitness of school buildings for occupancy may be placed in the hands of persons lacking knowledge of the anatomy of the human body and the conditions existing in disease and ignorant of the rudiments of sanitary science, as no qualifications whatever are required in the school nurses to be appointed. If these matters are to be entrusted by school directors to nurses it should be demanded at least that the nurses appointed should possess qualifications which will enable them to perform intelligently the duties with which they are charged as is required of school teachers."

While the intent of this bill may have been praiseworthy, the bill itself was open to many objections and its passage was opposed by the State Board of Health, which asked Governor Deneen to veto it. The bill was never approved by the physicians of the state and the action of the governor in vetoing it is entirely satisfactory to them.

Medicolegal

Admissibility in Malpractice Case of Evidence of Conveyance of Property to Wife—Damages Recoverable

The Appellate Court of Indiana, Division No. 1, in Harrod vs. Bisson (93 N. E. R. 1093), an action brought to recover damages alleged to have resulted from the negligent and unskilful manner in which the defendant reduced and treated the plaintiff's fractured and injured wrist and hand, where it affirms a judgment for $1,000 in the plaintiff's favor, holds that it was admissible to ask the defendant, on cross-examination, whether he conveyed his real estate to his wife after this action was brought or just before. The court says that, as an independent fact, this conveyance by the defendant of his real estate to his wife was foreign to any issue in the case, and it could be competent and material, if at all, but for one purpose, namely, it might disclose inculpatory facts and circumstances, or an admission by way of acts and conduct proper to be submitted to a jury, as tending to show that the defendant himself was conscious of having failed and neglected to treat the plaintiff's injured arm in that skilful and careful manner which the law required under such circumstances, and feared that he might be required to respond in damages on account of such neglect and lack of skill. The court assumes that it was on this theory that the court below admitted the evidence. The defendant testified in chief to his treatment of the broken arm, and in effect denied any act of omission or commission that in any way tended to show any lack of professional skill, care or attention, but said in effect that he did everything that a careful, attentive and skilful surgeon would have done under the same circumstances. This being the effect of his testimony, it was proper on cross-examination for the plaintiff to elicit from him any admission, by way of words or conduct, that tended to contradict, destroy, weaken or discredit his said evidence in chief, and the court thinks the evidence, or admission elicited by the question objected to, tended, in some degree, to have that effect, or at least was a question necessarily preliminary to other questions which might elicit answers having such tendency and effect, and that for that reason the evidence, if competent and proper at all, was proper in cross-examination. There seems to be some conflict in the authorities in different states as to the admissibility of this character of evidence, but the court thinks the weight of authority and the better reasoning of the same favors its admission. However, after this question and an affirmative answer, the defendant was entitled, on a redirect examination, to a full explanation and statement of all the facts and circumstances of the conveyance to the end that the jury might draw no improper inference from the admitted evidence. He also had the further protection that the law affords of defining the application and purpose of the admitted evidence by tendering an instruction on the same.

It was objected that an instruction authorized the jury to take into account, in estimating damages, the worry and annoyance of the plaintiff, on account of contemplation of her deformity. There was no doubt but that counsel were supported by the weight of authority in their contention that any annoyance, worry or mental pain resulting merely and solely from the contemplation of a deformed member of the body, and the humiliation of going through life in such a crippled condition, were too remote to be considered as elements of damage. On the other hand, it is well settled in Indiana that personal disfigurement or deformity resulting from negligent injury is a proper element to be considered in estimating damages, and such "anxiety and distress of mind as are fairly and reasonably the plain consequences of the injury complained of" are proper elements of damages. And it was entirely proper that the jury, in estimating the damages in this case, should take into account any personal deformity resulting to the plaintiff from her injuries, and it was proper also that they might consider any mental pain, suffering, "worry" or "anxiety" experienced by her in the actual use of the injured wrist and hand that was the direct result of the deformed condition. It was in this sense that the jury were authorized by the instruction to take into account such elements of "worry" and "anxiety," and not that the jury should consider any "anxiety" or "worry" resulting from the humiliation that came from the contemplation of the deformed condition.

What are Covered by Questions as to "Former Illnesses"—Tuberculous Laryngitis

The Supreme Court of Minnesota holds, in Gruber vs. German Roman Catholic Aid Association of Minnesota (129 N. W. R. 581), that a general question, in an application for life insurance, calling for information concerning "former illnesses" of the applicant, does not require the disclosure of an illness or ailment of a trifling, temporary or unimportant nature, but only those of a serious, dangerous or permanent character, although the rule no doubt is otherwise where the questions are specific.

The insured in this case in January, 1907, made an application for membership in the defendant association. His answer to the question: "Former illnesses and injuries?" was, "Small-pox in 1904. Complete recovery." But the evidence tended to show that during parts of the year 1905-06 he was treated by his physician for a throat trouble, the nature and character of which did not seem to have been disclosed to him. He was advised to make a change of climate, in the expectation that the difficulty would disappear. Acting on that advice, he went to Colorado in the spring of 1906, and remained there until August of that year, when he returned to his home in Minnesota, being pronounced cured, by the physician. He was about 24 years of age. In January, 1907, he made the application and answer therein stated above. In the fall of 1908, he was again taken ill, and died of tuberculous laryngitis in the spring of 1909. The association contended that the evidence was practically conclusive that he was suffering from that disease during the time of his treatment in 1905 and 1906, and that his failure to disclose it was fatal to his beneficiary's right to recover the insurance. Not so, however, is the legal decision.

In affirming a judgment in favor of the plaintiff beneficiary, the court holds that the jury were properly instructed that if the illness was of a serious, dangerous or permanent character, or of a nature continuous and not readily recovered from, it was the applicant's duty to make it known, and if he failed to do so no recovery could be had; but if the illness was merely temporary in its character, something that was unattended with any serious consequences, or from which serious consequences were not to be apprehended, something that passed away, from which he recovered and which was forgotten, the failure to disclose it would not avoid the contract. It is also held that the question whether the application in this case failed to disclose a prior serious or permanent illness was one of fact for the jury, and that the evidence sustained the verdict that it did not. Controlling effect was not to be given the advice of the physician. Suggestions that a change of climate would be beneficial are often made by physicians, when no serious ailment or disease is present. It was clear from the evidence that the man had no thought that he was suffering from a serious ailment, fully believed that his throat trouble had disappeared, and had apparently forgotten about it, while the physician also testified that the disease resulting in death might well have originated and come on after the man had become a member of the society.

Death from External Injury by Accidental Means—Susceptibility to Disease

The Supreme Court of Minnesota, in Ludwig vs. Preferred Accident Insurance Company (130 N. W. R. 5), affirms a judgment for the plaintiff for indemnity for the death of her husband, on a policy of accident insurance. It appeared that during the fifth or sixth inning in a game of baseball, in which the insured was engaged, he attempted to "steal second," and slid head foremost on his stomach the last nine or ten feet of the distance, stopping with his stomach over and on the second base, which consisted of a piece of a cement sidewalk paving block or slab, about 2 inches thick and 12 inches square, rough on one edge and smooth on the others. He indicated that he was hurt, and where; but continued to play until the end of the game. A day or two later he called a physician. His condition grew gradually worse, until he was taken to a hospital and operated on for appendicitis. His death was caused by septic peritonitis. The autopsy revealed a gangrenous condition of the appendix. Two enteroliths or concretions of the stony formation composed of a hardened fecal matter were found to be where the appendix was ruptured. His written application for insurance stated that he never had had physical infirmities or defects, and had not received medical or surgical attention within seven years immediately preceding. But it appeared that he had consulted a physician once or twice somewhat more than a year previous to his death: that the physician found some tenderness over the region of the appendix on pressure, and some soreness, and that he was suffering from a mild case of appendicitis, catarrhal in nature: that the physician prescribed a laxative, and never heard him complain after that.

The court holds that the evidence was sufficient to justify the jury in finding that the insured was injured by accidental means, and that the injury so received was the proximate cause of his death. It also holds that there was no reversible error in instructing the jury: "If you find that Ludwig had at some previous time suffered from an attack of appendicitis, and he had fully recovered therefrom, so that immediately before the external accidental injury at the ball game, if you find that there was such an injury received by him, there was then no appendicitis present, but because of such previous attacks Ludwig was more susceptible to the disease, and such an injury started it, there may be a recovery, although the external accidental injury would not have produced the appendicitis if his appendix had never been previously impaired by disease. . . . But if, because of the former attack, there was not merely a susceptibility to a further attack, but the actual disease itself existed, liable to be rendered active and virulent by Mr. Ludwig, in that event the active disease which resulted in death would not be regarded as the result of the fall alone, but as joint result of the fall and the latent disease, and there can be no recovery."

Essentials to Conviction of Rape on Insane Person

The Supreme Court of Missouri, Division No. 2, says that in the rape case of State vs. Warren (134 S. W. R. 522) there was ample evidence to support a finding that at the time of the defendant's alleged act of intercourse with the prosecutrix she was so mentally deranged as to be incapable of understanding the moral nature of the act, or of giving assent thereto. To sustain the conviction, however, the state must go further, and give some evidence tending to show that the defendant knew of and took advantage of this mental infirmity of the prosecutrix, or that he intended to have carnal knowledge of her body by force, if necessary, and regardless of her consent. As to the latter proposition, there was no evidence that such was his intent. All that the defendant did was with her apparent assent and approval. Whether there was any testimony from which knowledge of her incapacity to consent could be imputed to the defendant was a question not free from difficulty. Reason and authority suggest the following principles as guides in the solution of this question: (1) Carnal intercourse with a woman incapable from mental infirmity of giving consent is rape, unless the man is ignorant of her infirmity and its extent, believes he has her consent, and has no intention to have intercourse without her consent. (2) Where the woman in point of fact yields an apparent assent to the act, the burden is on the state to prove that at the time of the act she was incapable, because of mental disease, of assenting to or dissenting from the act, and that the defendant knew of such incapacity. It was therefore error to instruct the jury that mere insanity of a character to be recognized by a person of ordinary intelligence was enough to convict. There were two objections to this instruction: (1) Mere insanity, even if known, does not make the act rape. The insanity must totally destroy the capacity to consent. (2) The defendant must know that there is no capacity to consent. This knowledge may be inferred from facts and circumstances in evidence, but the jury must find as an ultimate fact that the defendant did know.

Remedy for Refusal of License is Appeal, Not Mandamus

The Supreme Court of Washington says that it was conceded in State ex rel. Brunn vs. State Board of Medical Examiners (112 Pac. 746) that no appeal was taken from the order of the board refusing the relator a license, and the controlling questions before the court were whether the relator had a complete and adequate remedy by appeal from the order of the board, and, if he had, whether mandamus would lie to compel the issuance of a license. There could be no doubt but that the first question must be answered in the affirmative. The right of appeal was expressly granted by section 8399 of the Code, the same to be taken within thirty days after the filing of the decision of the board. Then, it is a well-established doctrine, repeatedly recognized and announced by this court, that mandamus will not lie in favor of a relator who has an adequate remedy at law, by appeal or otherwise. Section 8399 above mentioned provides for a trial *de novo* (anew), on appeal from the order of the board, and such a trial *de novo* would secure to a complaining party as complete an investigation and as adequate a remedy as could possibly be obtained in a mandamus proceeding. It is manifest that the relator was afforded an adequate remedy by appeal, had he sought the same within the statutory period. This being true, he would not obtain relief by mandamus. Nor does the court agree with the contention that because the time for appeal had expired, and no remedy by appeal remained to the relator, he should obtain a writ, he insisting that his license was illegally refused. The adequacy of his remedy by appeal could not be affected by his failure to avail himself of such remedy within the statutory period.

Consent Required for Delivery of Bodies to Medical Colleges

A trial term of the Supreme Court of New York, New York County, says, in Newman vs. Stewart (127 N. Y. S. 866), that, under section 2213 of the New York Law, dissection of a human body may be performed with the consent of the husband, wife, or next of kin. This is extended, by section 316 of the Public Health Law, so as to permit hospitals to deliver corpses to medical colleges with the assent of "relatives or friends." A reasonable construction of this provision is that the consent of relatives must be obtained if they can be found, and that reasonable inquiry must be made to find them. Only in case they cannot be found will the assent of "friends" suffice. The evidence in this case did not disclose what, if any, effort was made to discover the relatives of the deceased, beyond the fact that the name of a woman was entered as "friend" in the hospital records. Her consent was obtained, and the post-mortem examination made in reliance on it. This was not a compliance with the law.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

Journal of Michigan State Medical Society, Battle Creek

June

1 Hospital Construction with a View to Economy in Maintenance. J. N. Holcomb, Grand Rapids.
2 Etiology of Anterior Poliomyelitis. T. Klingmann, Ann Arbor.
3 The Short Anesthetic, the Least and the Shortest Operation. B. Holmes, Chicago.
4 Genu Valgum, with Observations on Corrective Osteotomy. S. C. Graves, Grand Rapids.
5 *Diagnosis of Incipient Pulmonary Tuberculosis, with Special Reference to the Use of Tuberculin. T. D. Gordon, Grand Rapids.

5. **Tuberculin.**—Of forty-one patients, seen by Gordon, giving negative cutaneous tests, only one reacted to a subcutaneous injection, while of forty cases positive to the skin reaction thirty-six reacted to a subcutaneous injection; four were doubtful, due partly to the fact that it was not possible to

give subsequent injections. The patients who gave definite cutaneous reactions almost invariably proved very sensitive to subcutaneous injections. As an indication of sensitiveness to tuberculin, Gordon believes that the use of graded strengths of tuberculin applied by the technic of von Pirquet is as sensitive as any other test, and shows fairly well the cases that would react to the subcutaneous test. In view of the fact that a certain proportion of apparently healthy adults react to all the tests and that some of the worst cases fail to react, we should not allow any test of this sort to interfere with a careful history and examination of every case in which tuberculosis is suspected. Tuberculin alone cannot give a diagnosis A patient who fails to react to a series of tests carefully made with a good fresh preparation very probably does not have incipient tuberculosis. A patient who gives a reaction may have a latent or healed lesion, or the lesion which caused the reaction may be in a part of the body far remote from the disease which is causing the signs and symptoms of the patient's present trouble.

New York Medical Journal

June 3

6 Practical Treatment of Nervous People. J. J. MacPhee, New York.
7 *Tuberculosis of the Kidney in Women. H. N. Vineberg, New York.
8 Acute Hematogenous Infections of the Kidney and Pyelitis of Pregnancy; Their Medical Treatment. L. Louria, Brooklyn.
9 *Influence of Pregnancy on Diseases of the Eye. D. K. Shute, Washington, D. C.
10 *Immediate or Deferred Operation in Tubal Pregnancy? E. McDonald, New York.
11 *Relation of Uterine Myomata to Heart Disease. J. A. McGlinn, Philadelphia.
12 Acetone in Inoperable Cancer of the Uterus. A. Samuels, Baltimore.
13 Carcinoma of the Abdominal Wall in a Boy of 17 Years. J. P. Grant, New York.
14 *The "Liquor Bellostii" Test in Paresis. G. S. Amsden, White Plains, N. Y.

7. **Tuberculosis of the Kidney.**—According to Vineberg's observations, operative renal tuberculosis is more frequently met with in women than in men.

Renal tuberculosis in women is seldom or never associated with tuberculosis of the genital organs.

It is frequently overlooked in women and wrongly diagnosticated as catarrhal cystitis.

From the fact that it is oftener unilateral in women than in men, and that it is seldom or never associated in the former with genital tuberculosis, the prognosis of operative interference is much better in women than in men.

Nephrectomy for a tuberculous kidney in women is no bar to marriage or to bearing children.

9. **Pregnancy and Eye Diseases.**—Shute pleads for systematic and careful examination of the eyes of pregnant women by obstetricians with the view of safeguarding their vision and even their lives. He has found that albuminuric retinitis may exist for weeks, and even months, without pregnant women complaining of impairment of vision. The retinitis can exist for some time independently of, as well as in association with, symptoms of renal disease; also, independently of, as well as in association with, albuminuria. The presence of this retinal inflammation indicates a far advanced condition of the toxemia of pregnancy; or of that manifestation of the toxemia known as the kidney of pregnancy. The presence of this disease, in a larger number of cases than is realized, indicates a very grave prognosis as to the life of the patient, for the kidney of pregnancy may be followed by chronic interstitial nephritis. As long as the albuminuric retinitis lasts there is danger of vision being irretrievably ruined at any moment and in any month. The ophthalmoscope is the only means by which the earlier and relatively much less serious stages of toxemic retinal involvement can be detected. Also, it is the only means by which we may know that albuminuric retinitis even exists. Should the earlier stages of retinal involvement be detected, as they can, by the use of the ophthalmoscope, such remedial procedures can be adopted as may prevent the development of so sinister a disease as albuminuric retinitis; and, also, the necessity of inducing premature labor, in order to safeguard vision, may be obviated. When uranalyses are negative, the presence of pathological arterial tension and pathologic leukocytosis are invaluable symptoms of the toxemia of pregnancy. If increased arterial tension is persistent, as indicated by an abnormally accentuated second sound of the heart in association with a tense and wiry pulse, or as revealed by the sphygmomanometer, an ophthalmoscopic examination of the eyes ought by all means to be made at stated intervals.

10. **Operation in Tubal Pregnancy.**—The best treatment according to McDonald seems to be immediate operation without precipitation.

11. **Uterine Myomata and Heart Disease.**—From McGlinn's report a definite entity of a fibroid heart cannot be sustained. He found in a study of 113 post-mortem records of women dying with uterine myomata that such tumors occurring during middle and advanced life, are practically always associated with sclerotic heart lesions. These lesions are part of a general process and bear no relation to the fibroid. McGlinn is positive that many of the symptoms referable to the cardiovascular system found in fibroids are due to secondary anemia and occur just as frequently in anemia due to other causes. He notes that in fibroids there were found twelve normal hearts whereas in the cases without fibroids there were eighteen normal hearts. Again in the fibroid cases there were 195 lesions of the heart which were purely sclerotic in character and the same number of like lesions were found in the cases other than fibroids. These lesions expressed in percentage of the total lesions found were for the fibroids 80.9 and for the other cases 84.1.

While the total heart lesions in the fibroid cases were practically double those found in the non-fibroid ones, the normal hearts found in the latter exceeded the former by one. The sclerotic lesions found in the fibroid cases numbered fifty-one while those found in the non-fibroid cases were twenty-three. This would seem to show that fibroids did produce sclerotic changes in the cardiovascular system. This inference, however, is not justified, says McGlinn. He had no difficulty in collecting an equal number of cases, all under the age of 30 years, in which the total sclerotic lesions far outnumbered those found in the fibroid cases. Such a comparison would, he believes, be justified, as one must consider the fibroids selected cases as far as heart changes are concerned. In view of these considerations the verdict of not proved is a proper one.

14. **"Liquor Bellostii" Test in Paresis.**—Liquor Bellostii is prepared by dissolving mercury nitrate ($Hg_2(NO_3)_2$) in water slightly acidified with nitric acid. Pulverize 10 gm. of the salt in a mortar and very gradually add to this 86.6 c.c. of water to which 24 drops of a 25 per cent. solution of nitric acid has been added. If the acid water is not added slowly an insoluble precipitate results. The solution when right should be clear. The test is done as follows: To a few cubic centimeters of acid urine, which has been boiled, add 10 to 15 drops of liquor Bellostii. The urine is then boiled again two or three times. In negative cases there is a heavy white or chalky yellow precipitate formed; in positive results the precipitate is gray, almost black, and the supernatant fluid is yellowish. Of the urines thus examined by Amsden at Bloomingdale, thirty are included in the following note, of which fifteen were from cases of unquestioned paresis. The remaining fifteen control cases included the normal, paranoid, dementia præcox, manic depressive insanity and Bright's disease.

Of the paretics, four were positive, five so nearly negative that they were doubtful, and six frankly negative. Of the positive cases, three were clinically active; one stationary, bed ridden and entirely demented. In one of the active cases, two days before death, the reaction changed from doubtful to very positive. Of the doubtful cases, two were in the early stages of the disease and excited; the other three were in excellent states of remission and very intelligent. Of the negative cases, two were active and the others stationary, but decidedly demented.

Of the fifteen remaining cases, certainly not paretics, four were positive, three doubtful and eight negative. These results, says Amsden, need no comment as to the trustworthiness of this test as a diagnostic measure, whatever value it may have from a metabolic standpoint.

Journal of Minnesota State Medical Association and Northwestern Lancet, Minneapolis

June 1

15 *Abnormal First Dorsal Rib Simulating Cervical Rib. J. Hvoslef, Minneapolis.
16 Polio-Encephalitis. E. King, Fulda.
17 Appendicitis with Complications. J. W. Little, Minneapolis.
18 Anatomic and Clinical Relationship of Nasal Accessory Sinuses to Diseases of the Eye. W. R. Murray, Minneapolis.
19 Hay Fever; Its Name and Nature. W. N. Porteous, Minneapolis.

15. **Abnormal First Dorsal Rib Simulating Cervical Rib.**—In Hvoslef's case a young man, employed in a railway freight office, complained of pain and disability of his left arm, which had commenced the previous summer. It was mainly the elbow that troubled him. He had a steady pain there, radiating to his forearm and hand. He also had some difficulty in extending his forearm, and complained of a tingling sensation in his fingers. The pain was almost steady, both night and day. He had also noticed that his left hand would become very cold and pale, almost white at different times. Otherwise he was in good health. On examination of the arm the elbow-joint was found normal, with the exception of a spasmodic contraction of the biceps muscle, preventing complete extension of the forearm. Some atrophy of the muscles of the forearm was also present. There was a bony prominence slightly above the clavicle, about at the junction of its inner and middle third. The skiagram showed that the abnormal rib was not a cervical rib, but an abnormally developed first dorsal rib, originating, as its normal mate on the other side, from the first dorsal vertebra and ending with a jointed attachment to the second rib. The end of the rib was found articulating with the inner upper surface of the second rib, and the cervical plexus rested on top of this joint which, with its capsule, formed the bulk of the prominence felt above the clavicle before the operation.

Boston Medical and Surgical Journal

June 8

20 *Classification of Diabetes Mellitus. A. E. Austin, Boston.
21 *Prognosis and Treatment of Tuberculosis of the Ankle in Adults. M. H. Rogers, Boston.
22 Problems of School Inspection. W. P. Coues, Boston.
23 *Tuberculous Meningitis with Leukocytosis and a Purulent Exudation Containing Many Bacilli. I. C. Walker, Boston.
24 The Public Health Laboratory. B. L. Arms, Boston.
25 Pregnancy as a Possible Relief for Visceral Ptosis. L. T. Brown, Boston.

20. **Diabetes Mellitus.**—From a number of instances of varied sugar metabolism studied by Austin, he thinks that a plus utilization indicates a hopeful outcome of the disease and though the patient may have to maintain a moderate deprivation of carbohydrate food for a long period, and possibly for life, yet after a time a diet in which sugar alone is eliminated may be possible. In a restricted diet, however, he says, too strong a warning cannot be given against the so-called gluten breads, which are always exploited as containing a large protein content, but nothing is ever stated in regard to the amount of starch contained, or at least the term "practically starch free" is used. If the amount of protein is worthy of being accurately stated in terms of per cent., certainly the starch is worthy of the same treatment and such breads could then be much more intelligently employed, for it would be easy to add the amount of carbohydrate ingested in this way to that taken in other ways, so that a basis for our calculation of utilization could be had. It has been Austin's experience in the use of every diabetic bread, but one, and that not particularly palatable, that even their restricted use causes an increased elimination of sugar when the utilization factor is 0, which can be determined either by the collection of the urine after twenty-four hours fasting or comparing elimination with the intake; three possibilities are always present, either that the tolerance will remain stationary, that it will increase, or that it may diminish. By complete removal of starch and sugar for a period during which the urine should be carefully watched for sugar and particularly for diacetic acid, we can soon determine in which direction the indications with reference to tolerance point and govern ourselves accordingly. If the utilization is minus and the body cannot even oxidize the amount of sugar that theoretically ought to be derived from proteid containing not more than 10 gm. of nitrogen daily, then tolerance has reached its lowest ebb and there is very little likelihood that restoration will take place. Such individuals usually die from steadily increasing acidosis.

21. **Tuberculosis of the Ankle in Adults.**—This paper is a study of the results in the treatment of tuberculosis of the ankle-joint in adults, and is based on the cases (23) at the Massachusetts General Hospital during the last seven years. From a study of these cases it is clear that fixation is not sufficient to control tuberculosis of the ankle-joint in adults in a large percentage of cases, and even in mild cases it requires a long period of time. Chronic invalidism, meaning by that a certain mental condition that these people are sure to reach, when they are of no use to society, should be avoided. This can be done by an early diagnosis, and by outlining the treatment so that the end-result is obtained within one or two years. Rogers holds that a complete operation, a radical removal of the focus, should be performed before there is much involvement of the various joint-surfaces, and it should not be undertaken only because fixation has failed. Better results can, undoubtedly, be obtained if this is done as soon as the diagnosis is established, and seems justifiable since fixation is not sufficient.

Amputation has been necessary in over 50 per cent. of these cases. Rogers would advise it when the process has invaded several joint-surfaces especially posterior to the astragalus. The results of amputation are good from the patient's point of view, and an artificial leg is preferable to long-continued dressings and sinuses. The length of time of treatment should be diminished to within two years.

23. **Tuberculous Meningitis with Leukocytosis.**—A young adult with physical signs of meningitis, fever and leukocytosis showed on lumbar puncture turbid spinal fluid, containing 98 per cent. of polymorphonuclear leukocytes and very many bacilli, with the morphologic and tinctorial peculiarities of the tubercle bacilli, yielding by animal inoculation the typical lesions of tuberculosis. The case is reported by Walker to emphasize the fallacy of diagnosing meningitis as due to pyogenic cocci from obtaining a turbid spinal fluid containing a large excess of polymorphonuclear leukocytes.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Lancet, London

May 27

1 *Points of Clinical Interest Connected with the Exanthemata. S. Phillips.
2 *Fifty-Six Cases of Cleft Palate Treated by Operation. J. Ulrich.
3 *The Pressor Bases of the Urine. W. Bain.
4 *Nature of Connection Between Erythemata and Lesions of Joints. A. E. Garrod.
5 Salvarsan in Syphilis. G. Stopford-Taylor and R. W. Mackenna.
6 A Case of Spontaneous Fracture of the Leg Bones, Possibly Due to Mycotic Infection. E. W. H. Groves.
7 Acute or Paroxysmal Pulmonary Edema. A. E. Carver.
8 *A Case of Gastro-Enterostomy After Fifteen Years. R. Bevan.
9 Pneumothorax Complicating Bronchopneumonia in a Child Aged 2 Years. A. E. Sanderson.

1. **Exanthemata.**—The decrease in mortality of all the exanthemata in Great Britain is shown by Phillips to have been 73 per cent. in fifty-eight years. Of the individual diseases typhus has all but completely disappeared; small-pox occurs only occasionally as an epidemic, and is trivial in mortality as compared with that of by-gone years. As to scarlet fever, the mortality has fallen from 890 deaths annually per 1,000,000 persons living in the decade 1861-70 (1861 was the first year in which scarlet fever was classified by the registrar separately from diphtheria), to 80 deaths per 1,000,000 living in 1908—a decrease of 91 per cent. in forty-eight years. The deaths from measles per 1,000,000 living fell from 412 annually in the decade 1851-60, to 362

annually from 1901 to 1905. Measles is still, however, the most fatal of exanthems, causing three deaths to every one from scarlet fever, and to every two deaths from diphtheria; whooping-cough alone approaches it, causing 300 deaths to every 380 from measles. Since typhoid was first separated from typhus in the registrar's returns in 1870, the annual mortality from it has fallen from 390 per 1,000,000 persons living to 75 per 1,000,000 in 1908, a reduction of 80 per cent. Comparing the notifications of the disease with the number of deaths annually since the year 1890, the case fatality has fallen very little, if at all, from 16.9 per cent. to about 16 per cent. (it was 16.8 in 1908). It would, therefore, appear that the lessened number of deaths from typhoid is due in far greater degree to its lessened frequency of occurrence than to its lessened danger in individual cases.

2. **Cleft Palate.**—In the worst cases of cleft palate Ulrich operates, if necessary, on the alveolar process by the unilateral method with a Duplay's operation, by the double method after Bardeleben, and prefers to operate as early as possible. He operates subsequently for harelip at the age of from 4 to 6 months. The cleft in the palate will then, as a rule, diminish successively; but if it is, at the age of from 2 to 3 years, still very broad, he abandons the patient to the prothesis treatment. Ulrich thinks that there are cases in which a prudent squeezing of the jaws of the newly-born child will make the operation easier later. In the other cases, in which the cleft is narrower, he operates, if necessary, on the alveolar process also as soon as possible; on the harelip at the age of from 4 to 6 months, and for the cleft palate, he prefers Langenbeck's operation at the age of about 2 to 3 years, with a preference for the latter age.

3. **Pressor Bases of Urine.**—Pressor bases were found by Bain to be absent from the urine of children between 10 and 12 years of age, and apparently begin to be excreted about the age of 14. A vegetable diet considerably reduces the amount formed. Eggs and fish reduce the quantity to some extent, but if chicken is taken the amount is but little less than one obtains on an ordinary mixed diet containing butcher's meat. The bases are either absent or considerably diminished in cases of high blood-pressure. Doubtless the diminution in some cases is partially attributable to low dietary, but in most of the cases recorded in this paper the only possible explanation is that the bases are retained in the system and produce the rise in pressure. In gouty patients with normal blood-pressure the pressor bases are excreted in normal amounts.

4. **Erythemata and Joint Lesions.**—There is little doubt in Garrod's mind that erythematous and urticarial rashes are usually of toxic origin, as witness their development in some individuals after taking certain articles of diet or drugs, or as the results of stings of insects or of nettles, or of contact with caterpillars of certain species. One must suppose, therefore, that the lesions of joints which accompany them are likewise due to toxic influences working at a distance rather than to bacterial invasion of the articular structures.

8. **Gastro-Enterostomy.**—Commenting on his report, Bevan says it is pretty obvious that for at least the last five years the operation opening has more or less ceased to act, compelling food once more to find its way through the pyloric opening as best it could. Judging by the symptoms, although there has been more or less pain accompanying the passage of food through the pylorus into the duodenum, yet compared with the urgent symptoms in the pre-operated period of fifteen years before, digestion and nutrition were carried on with comparative ease and efficiency. This must by inference be due to some alteration in the capacity or patency of the pyloric orifice. No doubt, Bevan says, during the time that the operation orifice was patent, the lack of irritation allowed of the subsidence of a good deal of the inflammatory swelling, and, possibly, spasm around the sphincter. He suggests that possibly some alteration may have taken place in the character and situation of the original contraction scar. Again, in the vertical position, the shadow of the greater curvature in the stomach showed far below the umbilicus, and although peristalsis was seen it was ineffectual in reaching the pylorus. No adhesions were found at the subsequent operation.

Australasian Medical Gazette, Sydney

April

10 The Medical Profession in New South Wales. J. A. Dick.
11 Conductive and Spinal Anesthesia. C. MacLaurin.
12 *Endothelioma at the Base of the Brain, Producing Symptoms of Acromegaly. C. Reissmann.
13 *Bacteriology of Typhoid. H. Tebbutt.
14 Use of Thyroid Extract in Dementia Præcox. A. Danvers.
15 Outbreak of Arsenical Poisoning at an Isolated Farm Near Mullewa, Western Australia. J. H. L. Cumpston.

12. **Endothelioma at the Base of the Brain.**—The pituitary body with its stalk appeared to be healthy in this case, but the stalk arose from the lower surface of a large cystic swelling of grass-green color, which occupied the base of the brain and extended into the right optic thalamus. The swelling had almost completely severed the optic chiasma, and had thus caused blindness in the temporal field of vision. It bulged into the lateral ventricle and no doubt caused such great intraventricular tension that this led to the observed dementia. It pressed likewise on the lateral capsule, and thus gave rise to the spastic gait. Reissmann thinks that the circulation within the pituitary body was probably interfered with by the pressure of the cyst, and if so, the symptoms of acromegaly may have arisen from deficient internal secretion of the active principle of this gland. In the forward portion of the swelling, immediately in front of the pituitary body, was a hard nodule. In the transverse section of the brain this appeared to be a malignant growth. On microscopic examination the solid portion of the cyst was seen to be composed of round cells which clustered most densely round the small blood-vessels. There was no stroma. In many parts of a section it could clearly be seen that these round cells formed the actual walls of the small blood-vessels, from which it cannot be doubted that they arose. In some places the appearance presented was as if the capillary walls had been blasted and endothelial cells were scattered in all directions. The growth was, therefore, in Reissmann's opinion, an endothelioma. It contained much mucoid substance, some of which was structureless; in other parts it was confined within the bodies of cells, some of which it had distended to the point of bursting. The more solid part of the growth was arranged in circles or probably spheres, which carried the mucoid substance in the center. The growth may, therefore, be named a *myxo-endothelioma annulare*.

13. **Bacteriology of Typhoid.**—In all, fifty cases of enteric fever were examined by Tebbutt by the blood-culture method; thirty-six were positive, fourteen negative. In thirty-five the *B. typhosus* was found; in the remaining one an unidentified Gram-negative, feebly motile bacillus, with feeble fermenting properties. In a fifty-first case, Schottmuller's paratyphoid bacillus was found in both blood and urine. The average day on which both culture and Widal were done was the fourteenth day, and thus it is found in this series that, on an average, about 70 per cent. of cases still show bacilli in the blood-stream on the fourteenth day. Of course, the percentage is much higher in the first week of the disease (90 per cent. according to some writers). In only four cases were the bacilli found after the twenty-first day, and a bad prognosis may usually be given in these cases. Three of the four died, two from perforation and one from toxemia. In only one undoubted case were bacilli absent from the blood when the culture was made before the tenth day. This was a case which began very mildly, so that paratyphoid was suspected, the Widal developed slowly, but the temperature fell quite early, only to be followed by a much more severe relapse. In no case of relapse were bacilli found in the bloodstream, though no special attention was paid to this point. Recovery was more delayed in those cases in which bacilli were found after the fourteenth day than when they were found before this day associated with a positive Widal reaction. The early appearance of agglutinin is undoubtedly of good omen. Some cases suggest that the different reactive and immunizing substances produced by the infection are not always developed *pari passu*. For example, several cases showed an absence of blood infection at a stage of the dis-

case when the Widal reaction was negative or only partially positive. This seemed to Tebbutt to be explained in some cases by the occasional production of bactericidin in much larger amount than agglutinin.

Journal of Obstetrics and Gynecology of the British Empire, London

April

16 Pathology of Tumors of the Corpus Uteri. R. F. C. Leith.
17 *Method of Radical Extirpation of the Cancerous Uterus Based on a Series of Forty-Nine Cases. E. H. Tweedy.

17. **Radical Operation for Uterine Cancer.**—The point of greatest interest in these cases of uterine carcinoma centers around the question of operability and inoperability. It is apparent from the description given that Tweedy does not consider fixation of the uterus, pain, purulent discharge, infiltration of the broad ligaments, and cachexia, contra-indications to operation. In patients with serious involvement of the rectum and involvement of the bladder with pyuria, recovery from immediate operation is not likely to give relief to symptoms or prolong life. These alone are the cases Tweedy refused to operate. Extreme fatness is a hindrance but not an absolute contra-indication to the abdominal operation. Cachexia may point to involvement of the liver, but not necessarily, and even were the liver involved to a slight extent he does not see that it constitutes an insuperable barrier to the removal of a cancerous growth. Contrary to the popular belief cancer may be almost the least painful of mortal ailments. At necropsies, he has seen most extensive malignant disease undiagnosed during life and causing an absolutely painless death. When cancer ulcerates it causes pain, horrible fetor and destroys the appetite by absorption of toxins. The result is the most dreaded form of disease. To save such pain and distress is to Tweedy a justification for operation even if metastases are already present. Tweedy is a strong advocate for the use of buried fine silk ligatures and sutures prepared after Kocher's method. He says they are perfectly safe in early cases but have no place whatever in advanced cancer. Catgut should be used here even for the abdominal wall and in the latter situation he reenforces by silkworm gut mattress sutures through the skin and aponeurosis, tied on the skin over buttons at each side of the incision.

Archives Générales de Chirurgie, Paris

March, V, No. 3, pp. 241-360

18 *Rational Operative Treatment of Breast and Superficial Cancers. (La thérapeutique chirurgicale rationelle du cancer du sein et des cancers cutanés en général.) P. Nadal.
19 *Industrial Electric Burns. A. Besson.
20 Cystic Epitheliomas of the Breast. F. Jacoulet and P. Moure. Commenced in No. 2.

18. **Treatment of Cancer of the Breast.**—Nadal remarks in regard to the propagation of cancer that mechanical laws propose but the soil disposes, and that some of the mechanical laws involved have been overlooked hitherto. Among the points to which he thinks greater attention should be paid is the traumatism from the preparation of the field for the operation. The lymphatic circulation in the region is affected by these preliminaries and the diffusion of cancer cells promoted by the mechanical injury before the operation is even commenced. Cancer cells are not closely coherent to each other and by the manipulations before and during the operation are actually forced out into the efferent vessels. They are thus carried in suspension in the blood and lymph and when blood and lymph exude into the wound they bring cancer cells back with them, even when the actual cancer has been removed in a single mass into sound tissue. The retraction of the tissues after they are cut forces out the blood and lymph bearing the cancer cells, forcing them both outward into the wound and inward into the efferent veins and lymphatics. Before the patient reaches the surgeon he has felt of his cancer innumerable times, and the neoplasm should be covered with a protecting dressing and even the surgeon should refrain from all but the lightest palpation and the skin should be prepared for the operation without friction. Nadal advocates removing the cancerous focus alone, and only after this wound has healed, that is, not until fifteen to twenty-five days later does he cut out all the scar and adjacent tissue forming the bed of the tumor. In a cancer of the breast, for instance, he cuts out the nipple, the cancer focus and the intervening tissue in one mass in the first operation. At the second operation, he removes with the bed of the tumor all the cancer germs that have been poured out into the wound. An additional advantage of thus operating at two sittings is that if the supposed cancer proves to be non-malignant, there is no need for further mutilation of the patient. In case of recurrence, he emphasizes the fact that even advanced cancer is merely a multilocal affection and the surgeon should attack every accessible metastasis as if it were the only localization of the disease.

19. **Industrial Electric Burns.**—Besson reports two severe cases and gives the details of eight others from French literature. They confirm the assumption that in an electric accident there is first primary inhibition of the respiration; the arrest of the heart action is secondary. The burning of the tissues serves as an "interrupter" and allows the organism to gain time before succumbing to the effect of the current, so that artificial respiration in time will resuscitate the patient just as after apparent death from drowning or under chloroform. Instead of the Silvester technic, he compresses the chest with his hands applied flat on each side, then suddenly releasing the pressure. The tongue should be drawn out and occasionally the depths of the throat may be touched with a tampon wound on a forceps. He quotes in conclusion Jellinek's advice in regard to cold enemas, venesection, lumbar puncture, possibly brief reapplication of the same current, and keeping the head high, as supplementary measures. But artificial respiration is the main reliance.

Bulletin de l'Académie de Médecine, Paris

May 16, LXXV, No. 20, pp. 553-576

21 *Prophylaxis of Hereditary Transmission of Syphilis. (L'Hérédosyphilis.) C. Leroux and A. Pinard.
22 *Radium Ions in Therapeutics. (Introduction de l'ion radium dans les tissus pathologiques, sans effraction de l'enveloppe tégumentaire.) A. Béclère.

21. **Inherited Syphilis.**—Leroux has been studying conditions in 136 syphilitic families; there were 413 pregnancies, with only 207 children born alive. He has charge of a dispensary and he urges careful search for signs of inherited syphilis in every infant seen at a dispensary. From the infant it is easy to trace out the syphilis in the parents which would otherwise escape detection. It should be sought for as tuberculosis is now hunted out, and the parents should be educated in their duty to their offspring, especially the four things which they should avoid, as Fournier has proclaimed, namely, begetting children at all, failing to watch over the health of their offspring from birth, failing to institute treatment for the inherited syphilis, and failure to keep up this treatment in the same way and for as long a period as for acquired syphilis. Pinard corroborated Leroux' statement in regard to the necessity for keeping continuous moral and therapeutic control over the family, but he emphasized still more the preponderant part played by the father in the transmission of syphilis to the children. When derived from the mother, the inherited syphilis is more harmful and more tenacious, but in his experience the infection is derived from the father in the majority of the cases, and the mother may escape. He adds that no person having contracted syphilis, whatever the interval since or the courses of treatment, is ever absolutely certain of being cured, from the standpoint of offspring, and physicians should impress on their syphilitic male patients that to have healthy children they must take a special, additional systematic course of treatment, *la cure de l'hérédité.*

22. See Paris Letter in The Journal, June 10, page 1735.

Journal de Chirurgie, Paris

March, VI, No. 3, pp. 249-364

23 Technic and Indications for Decortication of the Lung. According to Delorme, for Chronic Empyema. R. Picqué.

April, No. 4, pp. 365-468

24 Treatment of Crushing Injuries of the Legs. (Les écrasements du membre inférieur.) L. Impert.

May, No. 5, pp. 469-616

25 *Rhizotomy for Tabetic Gastric Crises. (L'opération de Förster dans le traitement des crises gastriques du tabes.) R. Leriche and G. Cotte.

25. **Resection of Posterior Spinal Roots for Tabetic Gastric Crises.**—Leriche and Cotte *report a case and summarize ten* others from the literature, giving an illustrated description of the technic. Two of the eleven patients died from infectious complications, but in all the other cases the operation seems to have conquered the gastric crises. In six of the surviving nine patients the result was a complete success and the others were cured for a time at least. Study of the cases shows that the operation should be reserved for cases in which the gastric crises are due to a lesion in the sympathetic nerve, with little inflammation of roots and meninges. When the latter are involved there is liability of some recurrence of symptoms after a few months, as occurred in the case reported. One of the eleven operations cited was done in Holland, two in France and the others in Germany.

Lyon Médical, Lyons

April 9, CXVI, No. 15, pp. 633-676

26 Absorption of Sugar by Kidney Tubules. (Résorption du sucre par les tubes du rein.) R. Lépine.

April 16, No. 16, pp. 677-732

27 Interpretation of Radiologic Findings in Lungs, Bronchi and Adjacent Vessels. F. Barjon.

April 23, No. 17, pp. 733-776

28 Abdominal Hysterectomy for Uterine Myoma; 400 Cases. Albertin.

29 *Analogies Between Epidemic Pneumonia in Institutions and Pneumonic Plague. (Analogie entre la peste mandchourienne et les épidémies hospitalières de pneumonie. Traitement. Prophylaxie.) H. Rondet.

29. **Fixation Abscess in Pneumonic Plague.**—Rondet has been impressed with the analogies between the pneumonic plague as it is described in reports from the Orient and epidemics of pneumonia which he has observed in an institution at Lyons. Cold, dampness, lack of sunshine and overcrowding favored the spread of epidemic pneumonia, but it did not spread outside the institution. Rondet does not think there is danger of the spread of the plague in Europe. His experience with fixation abscesses in pneumonia has been so favorable that he urges a trial of Fochier's aseptic turpentine abscesses as liable to be useful in plague. It is stated that the disease generally runs a milder course when a bubo suppurates.

Presse Médicale, Paris

May 13, XIX, No. 38, pp. 385-400

30 **Distribution of Cancer in France.* (Statistique du cancer d'après des documents nouveaux.) J. Bertillon.

31 *Traumatism and Tuberculosis. J. Ribera y Sans.

May 17, No. 39, pp. 401-408

32 *Subarachnoid Meningeal Hemorrhage. A. D'Espine.

33 **Fixation of Tube in Larynx.* (*Fixation des tubes d'O'Dwyer dans le larynx par le procédé de Polverini et Isonni.*) A. Bonain.

May 20, No. 40, pp. 409-424

34 *Albumin Reaction in Pulmonary Tuberculosis. H. Roger and Lévy-Valensi.

35 Streptothricosis. (Quelques remarques sur les oosporoses.) L. Bory.

36 Mucilaginous Laxatives. A. Mathieu.

30. **Distribution of Cancer.**—Bertillon's article was summarized in the Paris Letter in The Journal, April 8, page 1050. The diagrams and maps show further that among forty-nine French cities with over 30,000 inhabitants, of *the sixteen* in which comparatively little meat is consumed per capita, only two of the cities are in regions where cancer is prevalent. His tables also show the relative rarity of cancer among Jews, in Algeria and at Amsterdam, and the *increasing frequency* of cancer of the stomach and rectum, according to the French statistics; the number of cases of malignant disease of other organs has kept about stationary year after year since 1876.

31. **Traumatism and Tuberculosis.**—Ribera has been paying special attention to the coincidence of trauma and development of tuberculosis in a joint in his 606 operative cases. In sixty-four of the 141 cases of tuberculous processes of the larger joints there had been some preceding local trauma. This coincidence is too frequent to be merely casual, and he reports experiments on over 135 rabbits or guinea-pigs to determine the connection between the trauma and the following tuberculous process. The results show that the synovial membrane protecting the joints is endowed with remarkable resisting powers, so that it proved impossible to induce a primary tuberculous synovitis in the animals by intravenous or direct injection of tubercle bacilli into the joint. On the other hand, the experiments demonstrated that the tubercle bacilli have a special predilection for the bone marrow. In the various inoculation experiments they seemed to pass constantly into the bone marrow; even when they did not induce any lesions, inoculation of guinea-pigs with the bone marrow gave positive results. *In man, from some minute focus in a gland the bacilli may pass to the bone and be ensconced there, without giving rise to any pathologic process; then if a joint near by is injured in some accident the synovial membrane is no longer able to protect the joint against the invasion of the bacilli.* In his experiments he was never able to induce a tuberculous joint process except when the joint had been previously injured by direct injection of staphylococci; then, when tubercle bacilli were injected into a vein or into a joint, they were liable to locate in the joint and set up a white swelling. Mixed infection is thus probably the explanation for the positive results obtained in experimental research by others which have been accepted as proving the possibility of pure primary tuberculous joint lesions.

32. **Subarachnoid Meningeal Hemorrhage.** — In D'Espine's case a boy of nearly 11 had an attack of apoplexy with unconsciousness, convulsions, left hemiplegia and other symptoms indicating considerable hemorrhage in the lower subarachnoid space. The next day 16 c.c. of turbid and hemorrhagic cerebrospinal fluid under strong pressure was evacuated by lumbar puncture and the child regained consciousness. Exacerbation of symptoms prompted a second and third puncture the sixth and fifteenth days, after which all the symptoms gradually subsided. Nine days before the stroke the boy had fallen on the back of his head while skating, but he had not seemed to suffer from the fall. Bollinger has related a similar case of tardy post-traumatic apoplexy in a girl of 13 who died in less than two hours after the onset of the apoplexy which occurred a few weeks after a fall while skating. Others have reported similar cases, but D'Espine's is the only one of which he knows in which the patient recovered, and he is certain that the three lumbar punctures contributed to the favorable outcome.

33. **To Fasten the Laryngeal Tube in Place.**—Bonain commends from practical experience the Polverini and Isonni method of holding the tube in place by a stout silk thread introduced through the thyrohyoid membrane with a curved needle passed out through the pharynx. The thread is tied to the tube and the upper end of the thread is brought out through the mouth while the lower end, where it projects from the neck, is fastened around a roll of gauze.

34. **Albumin in Tuberculous Sputum.**—Roger and Lévy-Valensi reiterate that the presence of albumin in the sputum is the best means to trace the course of pulmonary tuberculosis, to determine when the process has been arrested and finally to affirm the cure. A few drops of acetic acid are added to the diluted sputum; it is then filtered, a little salt added and the whole heated to coagulate out any albumin that may be present. They tabulate the findings in 1,374 tuberculous patients or suspects from their own practice and that of eighteen other clinicians. The findings were negative in twenty-five of the forty clinically cured patients and in five of their own series of 141—their negatives including three suspects, one patient with acute miliary tuberculosis and one cured patient. The findings were negative in only seventy-six of the total 1,374 cases.

Deutsche medizinische Wochenschrift, Berlin

May 18, XXXVII, No. 20, pp. 913-960

37 *Prophylaxis and Treatment of Scarlet Fever. J. Lange.

38 Reciprocal Relations Between Lung and Chest with Emphysema. (Wechselbeziehungen zwischen Lunge und Thorax bei Emphysem.) H. Loeschcke.

39 Tincture of Soap and *Alcohol in* Disinfection of the Hands. W. Schumburg.

40 Serodiagnosis of Syphilis. (Auswertung des Antigen-Extraktes.) H. Hecht.

41 Elimination of Diastatic Ferment in the Urine. A. Rosenthal.

42 Treatment of Hay Fever. (Heufiebertherapie.) R. Hoffmann.

43 Experimental Syphilis. (Syphilitische Allgemeinerkrankung beim Kaninchen durch intrakardiale K[illegible]) J. Schereschewsky.

44 *Glycerin Treatment of Pernicious Anemia. Muktedir Effendi.

45 Water-Jet Massage. (Die Verwendung der Wasserdruckmassage in der Gynäkologie, Odontologie, Rhinologie, Otologie, Neurologie, internen Medizin, Dermatologie und Urologie.) W. H. Dreuw.
46 Tests for Milk. (Die Säurebestimmung und die Labhemmprobe der Milch.) K. Schern.

37. **Scarlet Fever.**—Lange declares that isolation is necessary for at least five weeks in case of scarlet fever, up to ten weeks or more. No child should return to school without a certificate from a physician that desquamation is over. It seems evident that scarlet fever is not contagious during the first twenty-four hours; this permits isolation in time. He insists that every case belongs in the hospital. In treatment, cautious tepid baths are of advantage but even more important is it to keep the mouth, nose and throat thoroughly cleaned without irritating the mucosa. Weak salt solution is perhaps the best rinsing water for the purpose, syringing out the mouth and nose. Even if this does not prevent the dreaded mixed infection, it is an advantage to have the child accustomed to such measures when mixed infection does develop. The scarlatinal diphtheria once installed, he injects 0.5 gm. of 3 per cent. phenol, twice a day, into the pillars of the fauces. He has often seen children with the severest general symptoms of sepsis with purulent discharge from mouth and nose and enormously swollen glands, with bad, rapid pulse, somnolency and cool feet and hands, recover completely under the influence of these systematic injections. The diet should be carefully regulated for weeks after a severe scarlet fever. He reviews the various complications, and remarks in conclusion that the old saying is still true that a mother can never be entirely happy in her child until it has successfully passed through scarlet fever.

44. **Glycerin in Pernicious Anemia.**—In Muktedir's case the patient was a man of 30 infected with syphilis four years before;. the anemia continued to progress even under mercury and iodid until there were only 970,000 red and 4,000 whites, with 20 per cent. hemoglobin. Death seemed impending when a course of glycerin was commenced last February. A tablespoonful of glycerin was given three times a day at first, and later up to 70 gm. The man began to improve at once and by the end of a month the reds numbered 4,200,000, the whites 5,300, with 100 per cent. hemoglobin. This confirms Tallquist's experience in a similar case. Both patients seem to be permanently cured. Muktedir's patient is still taking a little glycerin and seems strong and well. It is possible, he adds, that the glycerin may benefit only in the cases of anemia of intestinal origin. The only by-effect in his case was a brief transient diarrhea.

Medizinische Klinik, Berlin

May 21, VII, No. 21, pp. 801-838

47 *Treatment of Tuberculosis of Joints. (Die moderne orthopädische Behandlung der Gelenktuberkulosen.) E. Klose.
48 The Electrocardiogram. H. Winterberg. Commenced in No. 20.
49 *Treatment of Gastric Ulcer. (Kritisches zur Behandlung des Magengeschwürs.) H. Strauss.
50 Determination of Temperature of Infants' Food. (Die Wärmemessung der trinkfe[illegible] . Roeder.
51 The Glycerin Tampon i[illegible]
52 Radium Emanations in [illegible]
53 Case of Acute Hemorrh[illegible]
54 Colored Glass Wedges for Hemoglobinometer. (Verwendbarkeit von Goldrubinglaskeilen zu kolorimetrischen Bestimmungen von Hämoglobin und Eisen im Blute.) Charnass.

47. **Joint Tuberculosis.**—Klose regards conservative treatment as indicated in every case of tuberculous hip joint disease, except where there is direct vital danger, as with neglected suppuration with high fever and anemia. Under all other conditions conservative treatment is to be preferred and no considerations, such as the length of the course of treatment or the poverty of the patient, should deter from it. The poor functional results speak strongly against resection. In over 21 per cent. of his cases, the conservative immobilization of the hip joint in a cast, permitting the patient to be up and about, restored an ideal function to the joint with normal gait. Alapy has reported a similar outcome in over 21 per cent. of his 122 cases. The same applies to tuberculous knee lesions. General measures to supplement the local are indispensable, and the walking casts are very valuable in this respect, the patient not being confined to bed or room. Klose also advocates systematic tuberculin treatment, as this has a marked curative action on the local process, besides the benefit on the general health. The combination of tuberculin treatment with orthopedic measures for joint tuberculosis is one of the greatest triumphs of modern medicine, he thinks.

49. **Gastric Ulcer.**—Strauss cites some recent statistics which show that only about 50 per cent. of patients with gastric ulcer are permanently cured by internal treatment. It was formerly assumed that fully 90 per cent. of the non-hemorrhagic ulcers heal. He does not approve of some of the later diagnostic measures advocated as he makes it a principle to avoid all mechanical or other irritation of the interior of the stomach. He urges the importance of a course of internal measures when there is the slightest suspicion of an ulcer, as it can scarcely ever do harm, while the lack of it may do irreparable damage in case of an actual ulcer. He advocates prolonging the course of dieting even after the patient has apparently recovered. After considerable hemorrhage, he permits no food by the mouth, believing that the blood thus poured out into the gastro-intestinal tract will serve to nourish the patient for a time; even were this not the case he would be deterred from feeding by the mouth through fear of detaching some thrombus and thus starting the hemorrhage again. Hunger is borne better than thirst, and by proctoclysis, the "drop enema," the patient can be supplied with fluids besides the nutrient enemas, which he likes to give also by the drop method. Radioscopy has shown that the empty stomach keeps contracted, which is an aid in the healing of an ulcer. Operative treatment is the only means of cure for callous ulcer, but it is not indicated with ordinary simple ulcer unless the latter is refractory to repeated and prolonged internal courses or there is recurring hemorrhage. In the last year he has had three cases in which symptoms of ulcer recurred after an apparently successful operation. This confirms the importance of internist care long continued after every operation on the stomach, to prevent recurrence. The question now is to determine the other factors inducing ulceration, besides the factor of excessive secretion.

Münchener medizinische Wochenschrift

May 16, LVIII, No. 20, pp. 1057-1112

55 *Self-Infection in Obstetrics. (Zur Frage der Selbstinfektion in der Geburtshilfe.) M. Hofmeier.
56 Volvulus of Sigmoid Flexure and Hirschsprung's Disease. A. Heller.
57 Importance of the Etiology in Estimating Mild Melancholia. (Bedeutung der Aetiologie bei der Beurteilung leichter Depressionszustände.) G. L. Dreyfus.
58 *Fatalities After Injection of Salvarsan in Cardiovascular Disease. (Ueber Todesfälle nach Salvarsaninjektionen bei Herz- und Gefässkrankheiten.) K. Martius.
59 Technic for Intravenous Injection of Salvarsan. H. Ploeger.
60 Source of Error in Serodiagnosis of Echinococcus Disease. A. Brauer.
61 Plastic Operation for Prolapse of Rectum. (Zur dauernden Beseitigung des Mastdarmvorfalles mittelst Beckenbodenplastik.) [illegible]
62 *Functional [illegible] (Funktione[illegible] R. Oppenheimer.
63 Treatment of Uncomplicated Breech Presentation. J. Rothschild.
64 *Pessary Treatment of Prolapse of Rectum. A. Hofmann.

55. **Self-Infection in Obstetrics.**—Hofmeier has recently had two cases of acute sepsis after a normal and spontaneous delivery in previously healthy women of 17 and 28. These are the only cases of sepsis after normal delivery in his service during twenty years with over 11,500 obstetric cases. The necropsy in both revealed purulent plugs in the tonsils and the glands in the neck were enlarged in one case, but there had been no signs of tonsillitis at the time in either patient. He ascribes the sepsis to the arousing of virulent germs in the throat by the stress of the birth process, and their flocking to the wound left by separation of the placenta; they also evidently passed into the intestines and set up a local inflammatory process at various points. In the first case hemolytic streptococci could be cultivated from the lochia and the following day from the blood and yet the uterus wall was found normal throughout, the interior merely coated with a turbid secretion, the surface a reddish gray. In the other case the slight reaction in the cellular tissue of the uterus and the lack of inflammation in the veins and lymphatics seemed to exclude the possibility of infection from without; otherwise

the typical local reaction would have been much more serious. One tube contained pus and the fatal peritonitis had developed from this. He adds that it is evident that hysterectomy would have been useless in both cases, although everything at the time seemed to point to the uterus as the seat of the infection. If the cases had occurred outside of a well equipped and well managed maternity, the physician or the midwife might have been assumed to be responsible for the infection. Hofmeier ascribes it to self-infection from some practically latent focus elsewhere.

58. **Fatalities After Injection of Salvarsan in Syphilitics with Cardiovascular Disease.**—This communication issues from Ehrlich's institute and in it are analyzed all the cases of this kind on record, with those that have occurred in the institute, and those of which Ehrlich has been informed personally by letter or telegraph. Eighteen cases are thus listed, including three from his own experience and seven from the literature. The other eight fatalities have never been published. Martius concludes from his analysis of the cases that in only seven can there be any question as to the connection between the fatality and an injurious action of the drug on the heart. He states that in five of this group of seven, necropsy revealed the triad: syphilitic aortitis, coronary sclerosis and myocarditis or myodegeneration of the heart. In the sixth case there was hypoplasia of the heart and aorta, and in the seventh, in which the patient died in collapse, such severe changes were found in other organs as to offer a plausible explanation for the fatality, aside from the medication. In four of the total seven no objective signs of trouble in the heart or vessels had been apparent on clinical examination, and in three of these four there had been nothing to call attention to the heart in any way. The experiences related demonstrate, he says, that the above triad of aortitis, coronary sclerosis and myocarditis should absolutely contra-indicate the use of the drug. No unfavorable influence on the sound heart from salvarsan need be anticipated, he says, even with intravenous administration, if the dose is small, not over 0.3 gm., and if it is copiously diluted and care is taken that the reaction of the solution is not acid. Other experiences which he relates show, he adds, that angina pectoris, without complications on the part of the heart, is influenced by the salvarsan in the most favorable manner.

62. **Nervous Hypersecretion of Bladder Mucosa.**—Oppenheimer has encountered five cases in which tenacious masses of mucus were seen in the bladder and the patients complained of a smarting during micturition and unusually frequent desire to urinate during the day—not at night. The cystoscopic findings were approximately normal but the patients were extremely nervous and easily fatigued, and distressed by their symptoms which suggested chronic cystitis. Treatment should aim to convince the patients that the trouble is merely a harmless functional hypersecretion of the mucous glands. No local treatment is required; the aim should be to divert the attention away from the bladder and tone up the nervous system in general.

64. **Pessary Treatment of Rectal Prolapse.**—Hofmann's patient was a woman 70 years old, with extensive prolapse both of rectum and vagina. He introduced a pessary into the rectum and another into the vagina, fastening them together with a wire through the septum between. The prolapse was cured and the patient has worn her pessaries for several months without disturbance.

Gazzetta degli Ospedali e delle Cliniche, Milan

May 11, XXXII, No. 57, pp. 603-610

65 Oculomotor Paralysis from Peripheral Trauma. T. Di Giuseppe.

May 14, No. 58, pp. 611-626

66 *Cacodylic Poisoning from Medicolegal Standpoint. E Di Mattei.

May 16, No. 59, pp. 627-634

67 *Pelvic Fixation of Uterus for Retroflexion. (Retroflessione uterina e cura alla Pestalozza.) U. Ragusa.

May 18, No. 60, pp. 635-642

68 Fixation of Complement in Pellagra. (Ricerche sulla fissazione del complemento nei pellagrose.) L. Lucatello and M. Carletti.

66. **Cacodylic Acid from Medicolegal Standpoint.**—Cacodylic acid and salts are said to be free from toxicity, but Li Mattei's experiments with ten guinea-pigs, four rabbits and four dogs showed that sodium cacodylate is liable to induce symptoms and lesions showing great analogy with those from poisoning with mineral arsenic, both in the acute and chronic cacodylic poisoning. There was evidently an inflammatory process in both, differing only in its course, the parenchyma of the different viscera suffering the most. The liver and kidney parenchyma showed fat degeneration and necrotic lesions but the suprarenal capsules suffered most, the multiplicity and gravity of the lesions testifying to the fact that the suprarenals have less resisting power than the other organs to the injurious action of the drug.. The conditions of the experiments were made to resemble those of the therapeutic administration of the cacodylic acid in the chronic cases, while the other animals were given from 0.15 to 3 gm. of sodium cacodylate at one time, which always proved fatal in less than twenty-four hours after the subcutaneous injection. The symptoms of the acute poisoning corresponded to those from poisoning with organic arsenic.

67. **Intrapelvic Fixation of the Uterus for Retroflexion.**—Ragusa reviews fifty-seven cases in which Pestalozza's technic has been applied to correct retroflexion, and with the best results, by half a dozen gynecologists in Italy and at Pestalozza's clinic. The main feature of the technic is fastening the uterus in its normal position by suturing to the fundus a flap of peritoneum slit from the reflection on the inferior segment of the uterus. The flap includes, besides the strip of peritoneum and the connective tissue connected with it, a few muscular fibers from the external musculature of the bladder. The uterus is thus held in normal position without interfering with its physiologic expansion. All the patients on record have been free from disturbances since, and a number have passed through normal pregnancies.

Policlinico, Rome

May 14, XVIII, No. 20, pp. 617-648

69 *Lumbar Puncture in Treatment of Trauma of the Head. (Terapia dei traumatismi cranio-encefalici per mezzo della puntura lombare.) B. Prampolini.

70 Salvarsan in Syphilis. I. Ullmann. Commenced in No. 19.

71 Intravenous Mercurial Injections in Septicemia. S. de Rossi and others.

May 21, No. 21, pp. 649-680

72 Frambesia. (Frambœsia tropicale, buba brasiliana e malattia del Breda.) F. Rho.

73 *Influenzal Ear Lesions. T. Mancioli.

69. **Lumbar Puncture After Trauma of the Head.**—Prampolini reviews twenty-six cases on record in Italian literature in which lumbar puncture was applied in treatment of traumatic lesions of the head, and then reports a case from his own experience which illustrates anew its advantages. His patient was a man of 30 who had fallen on his back, hitting the right parietal-temporal region of the skull. Periods of great agitation alternated with extreme drowsiness and the pupils did not react to light or in accommodation, while the mind did not seem quite clear. There was intense headache in the right parietal region and the spine was tender, but there were no signs indicating fracture of the skull. Lumbar puncture released about 20 c.c. of a turbid, cherry-red fluid, under high pressure, and benefit was soon apparent. A second and third puncture were made the following and the third day, and by the end of nine days after the accident the patient was entirely restored. The trouble had evidently been a contusion of the brain with hemorrhage inducing abnormally high pressure on the brain. The headache and symptoms of irritation subsided completely after the second puncture, and by the third the cerebrospinal fluid was clear and colorless, showing that the extravasated blood had been reabsorbed.

73. **Influenzal Ear Lesions.**—Acute catarrhal otitis media was remarkably frequent, Mancioli states, during the epidemic of influenza at Rome this year, but it generally subsided without suppuration. Primary mastoiditis without involvement of the middle ear was also frequent; he operated in thirty cases of the kind. In each the trouble was a diffuse osteomyelitis rather than an abscess, and in nearly all healing was by primary intention after complete evacuation, removing all the bone involved.

Society Proceedings

COMING MEETINGS

American Medical Association, Los Angeles, June 27-30.

American Academy of Medicine, Los Angeles, June 23-26.
American Ophthalmological Society, New London, Conn., July 11.
American Otological Society, Atlantic City, June 26-27.
American Proctologic Society, Los Angeles, June 26-27.
Arizona Medical Association, Los Angeles, June 26.
Conf. of Bds. of Health of N. America, Los Angeles, June 30-July 1.
Maine Medical Association, Augusta, June 28-29.
Oregon State Medical Association, Los Angeles, Cal., July 10.

AMERICAN GYNECOLOGICAL SOCIETY

Thirty-Sixth Annual Meeting held at Atlantic City, N. J., May 23-25, 1911

(Continued from page 1747)

The Frequency and Clinical Significance of Funnel Pelves

Dr. J. Whitridge Williams, Baltimore: In typical funnel pelves the distance between the tubera ischii is reduced to 8 centimeters or less, while the usual measurement remained unchanged. Such pelves were noted in 6.1 per cent. of 2,215 consecutive full-term labors, are of equal incidence in white and black women, and sometimes give rise to serious dystocia. The funnel pelvis is the most common abnormality in white women, in whom it constitutes 44 per cent. of all deformed pelves. In colored women on account of the incidence of the more usual types, it is relatively less important, and stands forth in order of frequency. The prognosis depends not so much on the actual narrowing of the pubic arch or on the distance between the tubera ischii, as on the relation between it and the posterior sagittal diameter. Moderate degrees of dystocia can frequently be overcome by placing the patient in an exaggerated lithotomy or an exaggerated Sims' position. In either event, the antero-posterior and posterior sagittal diameters undergo an average increase of 1.62 cm., which so increases the available space as to make spontaneous labor possible. Such an enlargement affords an explanation for the successful outcome of certain low-forceps operations which appear theoretically impossible from the measurements taken in the usual position. Pubiotomy is the operation of choice in cases of pronounced dystocia, as it not only affects the delivery of the child, but leads to a permanent increase in the size of the outlet, which may be further enlarged by the softening of the fibrous union under the influence of the hyperemia incident to pregnancy, and thus make possible the spontaneous termination of subsequent labors.

DISCUSSION

Dr. Edward Reynolds, Boston: The inferior strait of the pelvis is of vastly more importance than the gynecologist has supposed, and is probably of more importance than the superior strait.

Dr. Edward P. Davis, Philadelphia: In cases of dystocia from funnel-shaped pelvis, when the obstetrician is called in consultation because the family physician cannot secure expulsion of the child, or finds it difficult to extract it, the instrument slipping, and the head of the child being low down, it is the duty of the practitioner to perform craniotomy, as the patient cannot be treated safely in any other way.

Diagnosis and Treatment of Contracted Pelves

Dr. J. M. Munro Kerr, Glasgow, Scotland: The diagnosis of contracted pelvis is not difficult, and the greater the deformity the easier the diagnosis. A careful measurement of the pelvis both by the hand and by a pelvimeter should be made. An estimate of the size of the child's head should be attempted both by palpation and cephalometer. The relative size of the head and pelvis should be estimated, and that should be the basis of treatment. Whenever possible this examination should be made in the thirty-sixth week, and again at the beginning of labor, if the pelvic deformity is of medium degree. One of the most striking features in connection with the treatment of contracted pelvis is the prominence given by all recent writers to spontaneous delivery. Spontaneous delivery is quite frequent with a conjugata vera of 9.3 cm. I have twice seen a child born spontaneously even with a pelvis of 7.5 cm., but no such case has occurred in my clinic during the last two and a half years. In 130 cases of contracted pelvis treated by forceps, the fetal mortality was 50 per cent., with a conjugata vera of 7.5 cm., 33 per cent. with a conjugata vera of 8.1 cm., and 15 per cent. with a conjugata vera of 8.7 cm. I have performed craniotomy seventeen times in the last two and a half years. I have done a pubiotomy three times, and symphyseotomy once. All these patients did well, and all the children did well. I consider pubiotomy an excellent operation, but it has a very limited field. Cesarean section is dangerous in suspect cases. In these cases the maternal mortality is 17.3 per cent., and if frequent examinations have been made it runs up to 34 per cent. If Cesarean section is performed in the suspect cases, undoubtedly the best results have been obtained by removing the uterus. What will lower the mortality and morbidity, both maternal and fetal, more than anything else is a more thorough training of students and young graduates to appreciate the importance of an early diagnosis of pelvic deformity and the limitations of every operation which may be employed.

DISCUSSION

Dr. J. Whitridge Williams, Baltimore: In the 2,200 cases which I discussed in my paper on funnel-shaped pelves, there were 16 per cent. of spontaneous deliveries in all classes of inlet contractions in white women as compared with 81 per cent. in black women.

Dr. A. Lapthorn Smith, Montreal: The tendency to hurry matters in these cases is a curse rather than a blessing, and it comes about very largely from conditions peculiar to this country. In America the doctor is told to hurry up or the woman will get somebody else, and it is this hurry-up spirit which makes it difficult to instill into the mind of the young doctor the important point that he must not hurry delivery until the time comes for it to be effected.

Dr. Richard C. Norris, Philadelphia: My attitude toward inducing labor in properly selected cases not more than two or three weeks before the calculated term will add to the table of spontaneous deliveries of the essayist. It is in this class that induced labor should be considered. The question of transperitoneal and intraperitoneal Cesarean section has never appealed to me. I believe that craniotomy is yet a conservative operation, which must be used in certain instances. I have twice in the past year been called on to perforate the head of the living child.

Dr. Henry D. Fry, Washington, D. C.: In Washington we have a large colored population, and I have noticed in examining a large number of pelves that fully 50 per cent. of the women have justo minor pelves. It is rather unusual for me to find in colored women a rachitic flat pelvis. In the white woman the justo minor pelvis is rather unusual, and the simple flat and rachitic flat pelves are more common. As to spontaneous labor, in the cases I have seen it has occurred in 60 or 70 per cent. of them.

Dr. John O. Polak, Brooklyn: My results from premature labor have been unsatisfactory. The fetal mortality has been considerable, and it has subjected my patients to the possibilities of infection. My associate and I have done Cesarean section in sixty-one cases without a death, and many of these patients were handled and brought in off of the ambulance after several attempts at delivery with forceps had been made. We have had no difficulty in delivering these women, and they have had no marked morbidity, and no mortality.

Dr. Robert L. Dickinson, Brooklyn: There is a large field for the induction of labor. I do not allow primiparæ to run overtime unless they have been well starved. Starvation and early delivery have given me successful results so far as the fetal death-rate is concerned.

Dr. Edward P. Davis, Philadelphia: With reference to Cesarean section, when a woman has had the test of labor and has a contracted pelvis, one need not necessarily wait for labor, but should resort to Cesarean section and in clean cases one will get good results.

Salpingostomy in Pregnancy

Dr. George Gellhorn, St. Louis: The occluded tubes are extirpated by the majority of operators. In a minority of instances, however, where the patient desires offspring, salpingostomy may be performed with safety. I operated in a case removing the left adnexa and splitting open the right tube. The patient gave birth to a healthy child three and a half years later and is about to be confined for the second time.

To prevent the recurrence of occlusion after salpingostomy, appropriate after-treatment is necessary, mainly the use of high degrees of dry heat. If the plastic operation is thus restricted, the patient will suffer no ill effects, even though a certain percentage of the tubes may again become sealed.

DISCUSSION

Dr. Thomas J. Watkins, Chicago: I have recently been interested in the technic of salpingostomy, having had trouble in making an artificial opening in the tube to avoid constricting it. Even in cases where the incision is made parallel, where the mucous membrane is turned over into the serosa and stitched, after the operation is completed, the opening is surprisingly and disappointingly small. Of late I have modified the technic, making a longitudinal incision, beginning at the distal end of the tube and suturing the mucous membrane on either side of the ovary, and in that way offering hope of not constricting the tube and of its not becoming occluded. I recall one case of opening the tube where pregnancy took place. This was a case of infection due to induced miscarriage. Gonorrhea was excluded. Examination of the husband proved there were spermatozoa. These tubes were both opened through an anterior vaginal incision. The woman bore a child afterward, and had a tubal pregnancy later, and at the time of the tubal pregnancy the opposite tube was found normal, except that there were a few adhesions about the fimbriated end.

Dr. Franklin H. Martin, Chicago: For three or four years, instead of doing salpingostomy in these slightly sacculated cases, I have been in the habit of employing a method of opening the tubes and rendering them patulous by means of hydrostatic pressure. Any tube that will hold from ten minims to half an ounce of fluid should be treated in this way. The tube is brought to the surface, and, after being liberated from adhesions, is placed on a thick laparotomy gauze sponge, and then the tube is milked in the direction of the fimbriated end. Almost every one of these tubes will rupture at the fimbriated end, opening up the tube along the fimbria, and at the same time causing evacuation of the tube.

Dr. J. Wesley Boveé, Washington, D. C.: I have done several salpingostomies. I have had one case of pregnancy, and this was ectopic.

Dr. Robert L. Dickinson, Brooklyn: I have spread the tube on the ovary in sixteen or eighteen cases and dropped it.

Salpingitis

Dr. Frank T. Andrews, Chicago: Salpingitis is not a disease by itself. It is a part of a general pelvic inflammation. The field of action is not the pelvis alone. Pelvic inflammation, in the majority of cases, begins as an acute vulvar or vaginal or uterine infection with a tendency to spread through the tubes to the pelvic peritoneum. The infecting agent may be the gonococcus, streptococcus, members of the colon bacillus group, pneumococcus and staphylococcus. Each variety has many grades of virulence and varies in the intensity of its virulence. Patients differ in their power to resist or combat infection, and this resistance is not a fixed state, but changes constantly during the progress of the disease. If, with reasonable certainty, within a reasonable time, we can cure by vaccines, then operation is criminal. It is understood that vaccines are contra-indicated in the acute stages of this or any other pyogenic process. The toxins are already in excess in the tissues, and to add more would be folly. Furthermore, no efficient antitoxin has as yet been produced for the toxins of the pyogenic organisms. This leaves, then, the chronic form to be considered, and it is known that chronic gonorrhea and other pyogenic infections are often cured by vaccines. Then why may we not use autogenous vaccines in cases of salpingitis? One limitation to their use is to be found in the anatomic relations of the Fallopian tube to the pelvic peritoneum. Each injection is followed by a decided reaction. Such reaction is marked by an increase in the intensity of inflammation in every infected part, meaning much local peritonitis with its usual results, and perhaps a diffuse peritonitis with death. Another danger in cases such as these in which spontaneous auto-inoculations are taking place is that the spontaneous inoculation or rupture of the tube may occur soon after an inoculation with autogenous vaccine. The effect of this will be the same as of a greatly increased dose of the toxin in a patient with acute exacerbation of the pelvic trouble. That is, the effect of the vaccine will be greatly to increase the severity of the acute attack. I believe that treatment by immunization has almost infinite possibilities for the future, but that the present state of our knowledge does not warrant us in experimenting on our patients. The battle will be won only when we can produce immunity with impunity.

DISCUSSION

Dr. Seth C. Gordon, Portland, Me.: Pyosalpinx was very much more common years ago than it is now. I operated on most of these cases through the vagina, making a thorough incision and establishing drainage, and nearly all those patients got well.

Dr. Edward Reynolds, Boston: In many cases of chronic vaginal discharge, as soon as the tubes are dealt with, the vaginal discharge decreases. I am inclined to believe it is due to the probability that in chronic salpingitis there is a passage downward of small quantities of discharge or of a ferment, which, on emerging into the uterus or vagina, keeps up a much more profuse discharge in the larger passages, the tubes acting as reservoirs for the ferment, and that increasing the vaginitis, and after its removal the tubes are clear. It is difficult for me to see how we can expect any very large percentage of cures in these chronic cases of salpingitis by vaccination, when one remembers the physical state in which most of these tubes are left.

Dr. T. J. Watkins, Chicago: Dr. Andrews' paper is along the line of developing immunity, and he has said that a patient does not get well because the local disease gets better, but the local disease gets better because the patient develops a general immunity. And this has been the idea in the treatment of pelvic infections. Now, the gynecologist does everything he can to develop immunity. He has found that if he drains a pus tube or takes it out in the most surgical manner without spilling the pus, the patient's temperature is not shortened. The patient runs a fever for two or three weeks, probably a little longer with an operation than without it, because the amount of bacteria and poison removed by the operation is less than the amount of physiologic resistance cut down as the result of the operation. So in these cases the surgeon has very much to be thankful for in this contest between physiologic resistance and bacterial invasion.

Double Ovarian Dermoids in Pregnancy

Dr. Walter P. Manton, Detroit: In the total number of cases collected there were twenty-seven double tumors noted in the non-gravid, and seventy-three single, and nineteen double, associated with pregnancy. In the non-gravid, twenty-three tumors were situated on the right side, and sixteen on the left. In the pregnant, of the single growths, eleven were on the right and ten on the left side. From the fact that, even with double tumors, menstruation is unaffected, or shows only slight disturbances late in the disorder, it appears that these growths have little influence on that function, and from the number of reported pregnancies do not, as a rule, prevent conception. On the other hand, their existence is always a menace to the health and even life of the mother during pregnancy, and especially following delivery, from the peculiar liability of dermoids to twisting of the pedicle, and in occasional instances during gestation, to the pressure caused by the size and position of the associated cyst. The coincidence of other new growths of the pelvic organs and dermoid cysts adds still greater danger to the maternal host, the two morbid products not infrequently becoming formidable complications in pregnancy, labor, or the puerperium. In thirty-one selected cases, there are noted as associated conditions: ovarian cyst in seven; par-ovarian cyst in two; ovarian fibroids of the opposite side in one, and uterine fibroids in seven. Malignancy was found present in the walls of the dermoid itself in twenty-four cases, a number sufficient to warrant a more careful investigation of these growths in the future. Moreover, suppuration is exceedingly liable to occur in these cysts, and fatal termination from infection has been reported in not a few cases.

DISCUSSION

DR. GEORGE GELLHORN, St. Louis: I know of an interesting case which occurred in the practice of Dr. Ehrenfest, which I would like to relate briefly. A young married woman, during her first pregnancy, had to be examined, and the presence of a tumor was determined. Laparotomy was performed during the fourth month of pregnancy, and a cyst removed, which was found to be a dermoid. On the other side there was a smaller cyst of exactly the same nature. But, as experience has taught that the removal of both ovaries during pregnancy threatened to terminate pregnancy, the second smaller ovarian dermoid was left behind. The family desired more children, and so the second ovary was not removed. The first pregnancy terminated normally, but the woman is kept under constant control. This woman has borne a second child since, and is now being watched closely to see if she may possibly have a third child, after which the dermoid cyst will be removed to prevent the possibility of carcinomatous degeneration.

DR. T. J. WATKINS, Chicago: With a double dermoid it would seem very feasible simply to leave a part of the tumor which retains the corpus luteum, and this probably will prevent the interruption of pregnancy.

DR. BROOKS H. WELLS, New York: The removal of these ovaries during pregnancy does not interrupt pregnancy. I recall a case in which there were two dermoid cysts of both ovaries, which were removed, the patient being advanced four months in pregnancy and went on to term.

DR. W. P. MANTON, Detroit: I have never had a case in which I have operated on both sides during pregnancy, removing the dermoids. In all reported cases in which the dermoid is on one or both sides, pregnancy has gone on uninterrupted. The majority of operators advocate leaving behind a portion of an ovary.

The Blood-Supply of Uterine Myomata

DR. JOHN A. SAMPSON, Albany, N. Y.: The main intrinsic uterine arteries, to which the name arcling may be given, penetrate the anterior and posterior uterine walls and lie between the outer and middle third. Their course is horizontal in the lower portion of the body of the uterus and obliquely horizontal (upward), as one approaches the fundus. Each arcling artery terminates in a medial, radial or centripetal and peripheral branch, the latter often anastomosing with a similar branch of the opposite arcling artery, thus establishing a communication between the two main arteries. All along the course of each arcling artery, radial branches arise which terminate in the endometrium, and also peripheral branches arise which nourish the myometrium. Sections of injected uteri containing myomata show that all tumors of an appreciable size have an arterial blood-supply which varies greatly in different specimens and in the larger tumors is frequently greater than that of the myometrium. The same sections fail to demonstrate any veins in many of the tumors; in others a few small veins may be seen throughout the tumor or about its periphery, while occasionally they are quite evident, but never as abundant as in the myometrium. The extrinsic and intrinsic arterial supply of these tumors explains many of the clinical phenomena. I can readily understand why these tumors may be shelled out from the uterine wall with slight bleeding occurring only in a few places. Tumors in which veins are found in their substance and about the periphery suggest that the change between arterial and venous blood occurs within the tumor; in those in which veins are not found it is impossible to demonstrate where this takes place. The regressive changes in these tumors, calcareous deposits, and necroses, are in many instances due to alterations in the vascularity of the tumor as a whole or a portion of it.

(To be continued)

Book Notices

PUERPERAL INFECTION. By Arnold W. W. Lea, M.D., Lecturer in Obstetrics and Gynecology, the University, Manchester. Cloth. Price, $9. Pp. 384, with illustrations. New York: Oxford University Press, 1910.

The author has undertaken to describe the etiology, bacteriology and pathology of puerperal infection with as great scientific accuracy as possible and at the same time to keep in mind the practical and clinical aspects of the various types of infection, giving with clearness and fulness the modern methods of diagnosis and treatment. In this attempt he has succeeded in giving a clear picture of this complex subject and has inspired confidence in his practical direction for treatment by his conservative views. After a short historical review and a short chapter on definitions, follows a brief discussion on frequency, mortality and morbidity in England, Germany and the United States. Unnecessary operative interference is rightfully blamed for the continuance of a high morbidity and mortality.

The difficult subject of etiology is concisely but well handled. The bacteriology of the female generative tract, during both normal pregnancy and the puerperium and in infection, is followed by a discussion of the conditions predisposing to infection and the important question of heterogenous versus autogenous infection. The influence of examinations and operative procedures in increasing the danger from the vaginal organisms is spoken of, while the slight pyrexias in the early days of the puerperium following well-conducted labor is attributed to autogenetic infection. The chapters on general pathology and pathologic anatomy are brief but clearly written and profusely illustrated. The uncertain state of our knowledge concerning toxemia and septicemia and the importance to be attributed to the hemolytic function of streptococci is shown by the author in his treatment of this unsatisfactory subject in the chapter on symptomatology. He gives correctly what is known, but the impossibility of distinguishing clearly between toxemia and septicemia is shown. The localized infections are satisfactorily pictured.

In the important chapter on prophylaxis the subject of the disinfection of the vagina is thoroughly discussed and while the author agrees with the majority of teachers in omitting the vaginal douche in normal cases he advises it in prolonged labor, in cases of purulent vaginitis, in cases of intrapartum fever and in all operative deliveries. Good rules for hand disinfection are given. Unfortunately, he seems to discourage the general use of gloves by emphasizing the drawbacks attending their use. He gives observations of Ahlfield and Walthard concerning the favorable influences on the puerperium of a long third stage of labor, but unwisely admits that it is quite impossible to wait one hour in private practice for the delivery of the placenta. The advice to remove portions of retained placenta is not carefully enough limited to avoid risk from the dangerous manipulation. The recommendation of a 2 per cent. solution of liquor cresolis compositus for an intra-uterine douche is dangerous advice.

Nearly one-third of the book is properly devoted to treatment. The general principles of isolation, rest, drainage and non-interference, except when absolutely necessary, are inculcated. In carrying out the latter in local infection the author does not take a decided stand, but, after stating the position of Kronig, Winter and others who abstain from all local treatment, he describes the various means of using antiseptics by douche and other topical treatment, likewise the technic of tamponade, finger curettage, *écouvillonage*, which is favored by the author, and curettage is fully described. The conclusions reached concerning the latter procedure are in general fairly conservative. Hot vaginal douches and hot air are preferred to cold applications in localized pelvic inflammation.

Some criticism might be made of certain details of the measures of general treatment which are not free from exploded ideas that have been handed down from uncritical times. We cannot agree that beef teas and meat extracts are of great value. Enemas of milk, eggs and beef tea cannot be given every four hours for any considerable period of time. The term "high enema" is bad if it implies the common but often refuted error that the rectal tube can be inserted into the colon. "Firm pressure" to check the secretion of milk is not necessary and of doubtful efficiency.

In the section on methods of destroying organisms and neutralizing toxic products in the blood and tissues of the body, the author is favorable to the collargol treatment and advises its general use. He seems to be ignorant of the investigation of the Council on Pharmacy of the American Medical Association. Phagocytin is unnecessarily given some space, since at the end of the paragraph the author says that further experiments failed to show that it exerted any favorable therapeutic influence.

The present state of the therapeutic use of the abscess of fixation is given without any recommendation by the author concerning its value. The intravenous injection of dilutions of formaldehyd solution is mentioned as having been tried in America with apparent success. A little further investigation of American literature would have shown that this dangerous experiment had a very ephemeral success. Serotherapy is judiciously discussed and the conclusion reached that its value is very questionable. Immunization by vaccines is likewise described and a more favorable view of its value obtained.

The indications for and the method of operative treatment of localized pelvic infection and of peritonitis are given with sufficient fulness. Hysterectomy is found indicated in cases of injury with infection and in some localized infections with abscess, in infected myoma and rarely in retention of fetus or placenta. Ligation of the pelvic veins is rarely indicated.

The book closes with a summary of treatment of both localized and general infection. It is a concise statement of the views of the author and worthily closes a laudable undertaking.

The Dawn of the Health Age. By Benjamin Moore, D.Sc., M.R.C.S., L.R.C.P. Cloth. Price, $1.40 net. Pp. 204. London: J. & A. Churchill (Philadelphia: P. Blakiston's Son & Co.), 1911.

This book is another evidence of the growing popular interest in health topics. While written by an Englishman, it applies to conditions in the United States as well as in Great Britain. The author endeavors to demonstrate the necessity for an entire remodeling of the present system of medical service in the interest of the whole community, by showing that thousands of lives and millions of money can be saved every year if disease is attacked on scientific principles "instead of being dallied with as at present." Dr. Moore advocates a system of state medicine by which competent physicians are made officers of the state for the suppression of disease, as police officers are employed for the suppression of crime. The author has evidently a strong tendency toward state socialism. Great Britain is apparently farther advanced along this line than the United States, as is shown by existing British laws regarding invalidity insurance, employers' liability, care of the sick by the state, workingmen's insurance, etc. While one may not agree with all of the conclusions, the book is interesting and suggestive. Chapters on the follies of present public health service, the doctor and his patient in private practice and in state practice, the evils and abuse of hospital systems and the evolution of a national medical service contain the basic facts and theories from which the proposed system of the writer is developed. Evidently the advocates of public health reform in England have encountered the same opposition as that met in this country, as is shown by the comments of the author on the objection that such a plan would be an invasion of personal liberty. He says, "Let us next look at the matter from the point of view, so often called in evidence by opponents, of the sanctity of the home and the intrusion on it of an army of officials. This is an ancient bogey which was taken out of its cupboard, carefully dusted and filled with fresh straw to alarm the British workman and voter when free education was granted him for his children. He was then told that his hereditary castle was gone forever and that he would have no peace or quiet with his wife and family on account of the unwelcome and prying visits of the school attendance officer haling poor little Johnnie away to school as to some prison or torture chamber. Now is it so in fact, after a good many years of reign of the school board? Is this reign really a reign of terror? Is the school attendance officer an irksome person in constant attendance at the poor man's home? No; he is only a terror to those, and they are but a small percentage, to whom he ought to be a terror and to whom we would all wish him to be a terror, who would neglect their children in a wicked and criminal way. . . . These officers, although they visit homes, have no more terrors for honest people than either the policeman or the gas-meter inspector." In another chapter he says, "Under the new regimé, medical treatment will be as free to everyone as is the school and education to-day and everyone must accept medical treatment in his own interest and that of the community just as he must to-day accept education for his child whether he wants it or not." Dr. Moore has presented an interesting argument for advanced constructive health legislation.

Public Hygiene. By Thomas S. Blair, M.D., Neurologist Harrisburgh, Pennsylvania, Hospital. Assisted by Numerous Contributors. In Two Volumes. Volumes I and II. Cloth. Price, $10 net. Pp. 644, with 158 illustrations. Boston: Richard G. Badger, (1911).

The growing interest in public hygiene would seem to warrant the preparation and publication of a comprehensive work on this subject, adapted to the needs of the general practitioner and the lay worker in sanitation reforms. Such a book is greatly needed and on first inspection Dr. Blair's book seems to meet the indications. More careful examination, however, arouses the suspicion that the material for this work was hastily put together and that too little time has been given to the processes of digestion and condensation. Frankly, the impression left on the mind of the critical reader is that material for a single, compact volume has been padded out to form two and that much material has been given place in full, which could better have been summarized or abstracted and that undue haste has been used in getting the work out. The two volumes are copiously illustrated, the plates being well executed from a mechanical standpoint, but not always having a discernible connection with the text. For instance, it is difficult to see the value in a work on public hygiene of a photograph of the elevator entrance to the rest-room of the Waldorf Astoria Hotel. Large photographs of the exteriors of public and private institutions are also of no discernible value. The binding is lacking in stability.

A Brief Text of Physiology. For Dental, Pre-Medical, and College Students. By Carl J. Wiggers, M.D., Department of Physiology, University of Michigan. Cloth. Price, $1.50. Pp. 207, with 47 illustrations. Ann Arbor: George Wahr.

This manual was originally intended for the use of dental students at the University of Michigan. It is an effort to cover the essentials of human physiology within the limits of the physiologic course given in dental schools. Only subjects of the greatest general interest have been included and discussions on debatable questions have been largely supplanted by statements of that side which to the author seemed to have the preponderance of evidence. It is rather more elaborate than a quiz-compend and is really a digest of present physiologic knowledge. A supplement contains directions for a number of experiments of use in demonstrating physiologic principles, space being left between the directions for each experiment, for the student to use in writing up laboratory notes.

The International Medical Annual. A Year-Book of Treatment and Practitioner's Index. 1911. Twenty-Ninth Year. Cloth. Price, $3.50. Pp. 748. New York: E. B. Treat & Co.

This year-book, in its twenty-ninth year, is fully up to the standard of former editions. In it is given a comprehensive review of the year's work in treatment, covering practically the whole field of medicine and surgery in all their branches. A new feature is an index of the matter contained in the section on "Therapeutics" under the names of diseases in the section "Dictionary of New Treatment." This prevents the reader from missing new remedies (largely proprietaries, by the way) or a particular form of treatment which has not found its way into general use. The book is well illustrated, having a number of good colored plates.

GENERAL INDEX

All *reading matter* in THE JOURNAL from January to June, 1911, inclusive, is indexed here. (For Current Medical Literature Index see pages 1948 to 2000). "Deaths," "Book Notices," and "Society Proceedings" are indexed under these titles at the ends of the letters "D," "B" and "S." Matter pertaining to the Association is under "American Medical Association." With the above exceptions, all matter is *indexed under the most important word of the heading that was used in* THE JOURNAL, *and* also under the subject heading. For instance, abscess of brain will be found indexed under "abscess" as well as under "brain." Such titles as "ocular manifestations, etc.," have been indexed under "eye." Cross-references have been made wherever this was possible. It is also well to remember that, in looking up a certain subject, related words should be consulted, for example, chest, thorax; skull, cranium; bowel, intestines. The letters used to explain in which department the matter indexed appeared are as follows: "E" editorial; "O" original article; "C" correspondence; "T" therapeutics; "Ml" medicolegal; "P" pharmacology; "M. E." medical economics, and "ab" denotes an abstract of an article that has appeared in full elsewhere. *Names of authors* of original articles appearing in THE JOURNAL are not given in this index, but are included in the Index of Authors.

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SOCIETIES

Abbreviations:
  Acad.—Academy.
  Am.—American.
  A.—Association.
  Conf.—Conference.
  Cong.—Congress.
  Hosp.—Hospital
  Internat.—International.
  M.—Medical, Medicine.
  Pharm.—Pharmaceutical.
  Phys.—Physicians.
  Ry.—Railway.
  S.—Society.
  Surg.—Surgical, Surgery, etc.

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CURRENT MEDICAL LITERATURE

INDEX TO SUBJECTS

Explanation: The *reading matter which appeared in* THE JOURNAL *is not indexed here,* except the original articles and the abstracts of original articles. This index refers to the titles and the subjects of original articles published in the leading medical journals of the world, including THE JOURNAL, during the past six months. The titles of the articles and the names of the journals in which they appeared were listed weekly in the Current Medical Literature Department, and it is to them that references are here made. The figure in parentheses refers to the paragraph; the number following to the page in THE JOURNAL. For instance, "Immunity, Studies on, in Cancers of White Rat, (76) 1512—ab," refers to page 1512 of THE JOURNAL, on which is found, in paragraph 76, the title of the paper and the name of the author, viz., "Studies on Immunity in Cancers of White Rat, I. Levin and M. J. Sittenfield." This title is listed under the journal in which the article appeared, the *Journal of Experimental Medicine,* May, 1911. When "ab" follows a page number it indicates that the article was abstracted in THE JOURNAL; for instance, "Pylorus, Congenital Stenosis of, (85) 697—ab." On page 697, paragraph 85, will be found an abstract of this article, which appeared in *American Journal of Diseases of Children,* February, 1911. Titles of articles which appeared originally in THE JOURNAL are indicated in the index by an asterisk (*) before the page number; for instance, "Breast, Cancer of, Operative Treatment of, *315," refers to page 315 of THE JOURNAL, on which is found the complete original article. The index to authors of all articles, both original and those listed under Current Medical Literature, appears separately *on pages 2001 to 2016 of this Index.*

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In this Index are the names of the authors of articles which have appeared in THE JOURNAL of the American Medical Association and of articles which have been listed from week to week in the Department of Current Medical Literature as having appeared in other journals. Thus it practically includes the names of all who have published articles in the leading journals of the world during the past six months. To add to its completeness, the names have been added of those who read papers before societies as published in THE JOURNAL. The * preceding the page reference indicates that the article appeared in full in THE JOURNAL. The numbers in parentheses indicate the numbered paragraphs on the pages referred to. The numbers not in parentheses indicate pages.

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